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ABSTRACT

This review focuses on both published and unpublished literature in the areas of education, employment, and independent living outcomes across 13 handicapping conditions. Preliminary chapters describe the database system used to manage the literature identified, and discuss research methods in transition literature. Subsequent chapters then review studies of the outcomes of youths with handicaps in the areas of education, employment, and independent living. Following the review chapters, the 120 articles reviewed are listed in an annotated bibliography. A classification system allows specific identification of articles that have a primary focus on any one of the three outcome areas or on any one of 13 handicapping conditions (learning disabilities; speech impairments; mild, moderate, and severe/profound mental retardation; serious emotional disturbance; hearing impairments; orthopedic handicaps; visual impairments; multiple handicaps; other health impairments; deaf-blindness; and educationally at risk). Appendices offer definitions of handicapping conditions and outcome area reference listings (about 250) for articles included in all three volumes of the literature review to date. The database records and programs necessary to run the retrieval system are available on computer disks for use with "dBASE III." (JDD)

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Transition Literature Review Educational, Employment, and Independent Living Outcomes

Volume 3

Delwyn L. Harnisch
Adrian T. Fisher

EC 222738

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INSTITUTE
AT ILLINOIS

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The following principles guide our research related to the education and employment of youth and adults with specialized education, training, employment, and adjustment needs.

- Individuals have a basic right to be educated and to work in the environment that least restricts their right to learn and interact with other students and persons who are not handicapped.
- Individuals with varied abilities, social backgrounds, aptitudes, and learning styles must have equal access and opportunity to engage in education and work, and life-long learning.
- Educational experiences must be planned, delivered, and evaluated based upon the unique abilities, social backgrounds, and learning styles of the individual.
- Agencies, organizations, and individuals from a broad array of disciplines and professional fields must effectively and systematically coordinate their efforts to meet individual education and employment needs.
- Individuals grow and mature throughout their lives requiring varying levels and types of educational and employment support.
- The capability of an individual to obtain and hold meaningful and productive employment is important to the individual's quality of life.
- Parents, advocates, and friends form a vitally important social network that is an instrumental aspect of education, transition to employment, and continuing employment.

The Secondary Transition Intervention Effectiveness Institute is funded through the Office of Special Education Programs, Office of Special Education and Rehabilitative Services, U.S. Department of Education (contract number 300-85-0160).

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Transition Literature Review:

Educational, Employment, and Independent Living Outcomes

Volume 3

Delwyn L. Harnisch

Adrian T. Fisher

The Secondary Transition Intervention Effectiveness Institute
College of Education, University of Illinois at Urbana-Champaign

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Preface

Transition Literature Review: Educational, Employment, and Independent Living Outcomes, Vol. 3, is intended for researchers, policy analysts, and practitioners. It provides a review of documents that focus on education, employment, and independent living outcomes across 10 handicapping conditions, plus those students considered to be educationally at risk. Both published and unpublished literature has been included in our examination. Systematic information was gathered from each of the selected documents, and a database system was developed to process all of our review notes.

The classification system developed for the documents allows the reader to examine any one of the 39 cells described in our literature review. These cells are created from the 13 rows representing the handicapping conditions (learning disabilities; speech impairments; mild, moderate, and severe/profound mental retardation; serious emotional disturbance; hearing impairments; orthopedic handicaps; visual impairments; multiple handicaps; other health impairments; deaf-blindness; and educationally at risk) and by the three outcome areas of education, employment, and independent living represented across the columns.

This framework allows specific identification of articles that have a primary focus on any one of the three outcome areas or on any one of the handicapping conditions. Thus, the reader has access to a wealth of information within any of these 39 possible cells. As the database now contains 296 articles across the three outcome areas and the handicapping conditions, there are many possible uses and data combinations that can be made to facilitate research and literature searches.

Volume 3 varies from the earlier volumes in a number of key respects. Only the 120 articles reviewed and entered in the database this year are considered in depth. This is reflected in the contents of the specific outcome chapters and in the annotated bibliography. The appendixes include references to articles from all three volumes; articles included for the first time in this volume are marked with an asterisk.

Other changes include two new chapters this year, one on research methodology that is aimed at providing a discussion of the various ways in which research can be conducted and how the information gained can be put to use. The information in the chapter is designed to assist your evaluation of the articles in the database.

Also included this year is a chapter that is a guide to the operations of the database system so that users may access the information in the system for their own uses. This is useful as the annotated bibliography and other database information will be available on computer disks for use with dBASE III on IBM and compatible microcomputers. An order form will be included fo those who wish to purchase these disks.

One of our objectives has been to produce a literature review based upon a conceptual framework that would provide a clear understanding of the classification of articles focusing on transition activities. To help readers locate articles we have made several improvements in indexing since Volume 1. Thanks to readers' and reviewers' suggestions, our annotated bibliography is now arranged alphabetically by the first author's last name instead of separated by outcome area. We have also added outcome area reference listings in Appendixes B, C, and D. With these enhancements, readers can now locate a document's record by means of the author's last name or its outcome area. Each document record contains a listing of the handicapping conditions represented in the research article.

We hope that this volume will be clear and helpful for those who are involved with transition programs and that it will be appealing and informative to the interested reader. We have worked to provide a synthesis of the transition literature based on three years of review of selected documents. The tables have been prepared to assist the reader to gain an understanding of the articles that are presently part of our database.

A major thrust of this year's task has been to expand the reviewed literature on independent living. Fifty-one new independent living articles have been added. In order to help the reader to achieve a better understanding of the numerous possible findings in this domain, the chapter on independent living uses the definition of independent living from Volume 1 as the basis for reviewing the expanded database. An effort was also made to achieve a more even distribution of articles across all three outcome areas and the handicapping conditions.

This report utilizes the important advances in electronic database management. Database files are created so that any operator of the system can create a report of selected references or abstracts. Those most familiar with database systems will appreciate the manner in which this system can assist them with their general literature searches and also with searches focusing on specific handicapping conditions. The possibilities are practically endless and provide the basis for quick recall for the policy analyst, and at the same time provide the practitioner with the capability to scan the system for articles that focus on employment, educational, or independent living outcomes for a particular handicapping condition. Readers are referred to Chapter 2 for a full discussion of the use of the database program.

It is our plan to continue to update this review with additional entries to the database through continued literature searches and networking. As new studies across handicapping conditions are completed at the local, state, and national levels, we expect to provide comprehensive additional analyses of the transition process from high school to postsecondary experiences. Overall, the continued expansion of this database will be a valuable resource in the examination of transition issues for youth with handicaps.

Acknowledgments

Many members of agencies, especially research librarians, provided assistance in the identification of articles and studies for this review. To them we own a great deal of thanks for their assistance in sharing with us their documents on the most current information: Secondary Transition Intervention Effectiveness Institute Librarian Lynda N. Leach and assistant Adrienne S. Harmon, the Research and Training Center on Independent Living, the Regional Rehabilitation and Continuing Education departments of the University of Arkansas, George Washington University, the University of Kansas, the University of Tennessee, and Southern Illinois University.

Many thanks also must go to the Mountain Plains Regional Resource Center, American Council on Rural Special Education, Rehabilitation Services Administration Region X, Center for Resource Management, Inc., Council of Exceptional Children, Employment Research and Training Rehabilitation Counseling Department of New York University, Gallaudet College Library, National Center for the Employment of the Handicapped Research and Training Institute, National Institute of Handicapped Research, Regional Resource Centers, Special NET, various State Departments of Special Education, The Network, Inc., and the Secondary Transition Intervention Effectiveness Institute. The insights that many of the librarians offered have helped to sharpen our perspective.

We also wish to thank the many individuals who have shared their thoughts and feelings on transition, provided articles, and made suggestions for improvements in presentation and reviews of the research findings. Craig Thornton of Mathematica Policy Research is specially thanked for his salient comments and critiques which have helped shape many of the changes in this volume.

We are also very grateful for the expert assistance of our colleagues from the College of Education and to Dale Snauwaert and Sigrid Danielson for their reviews of articles. The staff from the Transition Institute have been uniformly helpful, and we thank them with great pleasure for their dedication to our effort in the production of this transition literature database review system. Special thanks also goes to Cleta Conerty for her close reading of this text.

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Introduction

Delwyn L. Harnisch and Adrian T. Fisher

In 1985 the College of Education at the University of Illinois at Urbana-Champaign (UIUC) received a federal contract for the creation of an institute to study and evaluate services delivered to youth with disabilities who were entering the job market.

The Transition Institute at Illinois, which is funded for five years by the Office of Special Education and Rehabilitative Services (OSERS), U.S. Department of Education, conducts research and consults with federally funded secondary special education projects throughout the country. The Transition Institute is directed by Frank R. Rusch, Professor of Special Education.

The Transition Institute is designed to address both the theoretical and practical problems of transition from school to work, and to other community settings, for youth with handicaps. The Institute has grown out of the consensus among legislative, professional, and advocacy organizations that an initiative has been needed to establish a more systematic and effective delivery system.

The passage of P.L. 98-199 provided the authority to address this need, specifically through Section 626 -- "Secondary Education and Transition Services for Handicapped Youth." The mission of the Transition Institute is threefold: (a) to address a series of interrelated applied research questions, (b) to provide program evaluations, and (c) to provide technical assistance related to secondary special education and transitional services.

Review of Extant Literature

One of the major tasks of the evaluation research program of the Transition Institute is to examine the education, employment, and independent living outcomes attained by youth with handicaps as they exit school and enter the workforce. Federal, state, and local data sources, as well as follow-up studies, have been compiled and reviewed.

A database system has been developed for the collection, storage, and display of information from documents relevant to each of the outcome areas. A conceptual model has been created for processing the documents and summarizing the major findings in the literature concerning the outcomes of education, employment, or independent living. Information is also being added to our system from our contact with related organizations throughout the United States.

The search for documents focuses on the three outcome areas of education, employment, and independent living, for 10 handicapping conditions (selected in accordance with P.L. 94-142 guidelines, see Appendix A) and those of students considered to be educationally at risk. Table 1.1 summarizes the distribution of articles by outcome area and handicapping condition.

TABLE 1.1. Summary of the Distribution of Articles by Handicapping Condition and Outcome Area (N=296)

HANDICAPPING CONDITION	EDUCATIONAL	EMPLOYMENT	INDEPENDENT LIVING
Learning Disabilities	51	47	13
Speech Impairment	18	26	8
Mental Retardation			
Mild	21	65	45
Moderate	15	64	40
Severe/Profound	13	57	36
Serious Emotional Disturbance	18	40	14
Hearing Impairment and Deafness	28	38	10
Orthopedic Handicaps	17	43	15
Other Health Impairment	12	27	11
Visual Handicaps	18	32	13
Multiple Handicaps	13	34	14
Deaf-blindness	10	16	8
Educationally at Risk	9	15	4
TOTAL*	243	496	234

---

*Does not add to 296 because many articles included more than one handicapping condition.

An attempt was made to identify published and unpublished studies, journal articles, manuscripts, books, master's theses, and doctoral dissertations containing information on each of the selected outcomes under examination. Documents were selected for review on the basis of the following criteria: (a) data on at least one of the outcomes must be included in the article; (b) the study must deal with one or more of the 10 identified handicapping conditions (plus students who are educationally at risk); (c) the study must have been published since the passage of the Education for All Handicapped Children Act of 1975 (P. L. 94-142); and (d) the age range of the sample should be 16 to 24 (± 2) years. The age range of the sample has been amended to include some appropriate studies that included subjects older than 26 years.

In accordance with our goals, our primary focus has been on empirically based articles. Some articles that are discussions of significant theoretical topics or studies that examined interesting research questions but used subjects that were outside the limits of the specified age range (ages 16-24, ± 2 years) are included in the reviewed literature.

Educational outcomes were defined by such variables as achievement of education-related program goals; diploma/degree achieved; attendance; achievement of IEP goals; behavioral performance; achievement test scores; evaluation of progress by teachers, parents, and aides; status of non-completers; career education; program composition; and school-business collaborations.

Employment outcomes were defined in terms of employment status, job profiles, earnings, fringe benefits, stability of employment, job satisfaction, retention rates, work history, number of hours employed, methods of job attainment, employer attitudes, sheltered workshops, supported employment, and competitive employment. Self-advocacy and skills, living arrangements, education and training, mobility and transportation, use of generic services and facilities, recreation and leisure, community interaction, satisfaction with services, financial situation, and quality of life are some of the variables that defined independent living outcomes.

The descriptive analyses of the outcome areas in Chapters 4, 5, and 6 are based on 120 articles selected for review and entry into the database this year. These entries represent the results of both Institute and University of Illinois ERIC searches, selected documents from various bibliographies, and the papers received from various researchers currently involved in follow-up and outcome studies. Concurrent with the literature search we have attempted to contact personnel of related specialist organizations, universities, and national agencies for information about works in progress.

In addition to the _Transition Literature Review: Educational, Employment, and Independent Living Outcomes_, a document modeled after the _Digest of Data on Persons with Disabilities_ and _The Condition of Education_ is published annually by the Transition Institute. The _Digest on Youth in Transition_ describes recently catalogued information on such variables as the incidence of specific handicapping conditions, employment and unemployment rates for youth with and without handicaps, minority status among youth with handicaps, secondary school completion, employment status, earnings, and residential arrangements. The Seventh Annual Report to Congress on Compliance with P.L. 94-142, and the High School and Beyond data sets were examined in the first volume, and the Eighth and Ninth Reports, High School and Beyond, and a Transition Institute-developed longitudinal database were reviewed in the second volume. These data sets will be further explored in the third volume.

Database System

Jho-Ju Tu, Shei-Lan Shi, Delwyn L. Harnisch, and Michael L. Connell

The responsibilities of this research group are the completion of an annual review of transition literature and the compilation of an annotated bibliography. To accomplish these tasks, there is the need for systematic gathering and storage of information from research articles considered to be relevant to the objectives. This need has been met through the establishment of a computerized database that facilitates both the entry and retrieval of data in various forms and to various output devices.

The database for the Transition Literature Review project was established three years ago. It contains summary information from articles focusing on any one of the three transition outcome areas: education, employment, or independent living. Two hundred and ninety-six articles have been collected, reviewed, and are currently entered in the database.

Using the dBASE III program, this database has served as the primary method of storing and retrieving information from reviewed documents. Document review is conducted in a systematic manner using a worksheet that is designed to correspond to the variable field structure defined in the program.

Database Structure

The database variable structure (see Figure 2.1 for the

Figure 2.1. Variable Structure for Database

```
Structure for database :  C:base.dbf

Number of data records   :    296

Date of last update      :  07/10/87

Field    Field name  Type          Width    Dec

      1  ACHE_PRI    Numeric           1
      2  IN_DATE     Date              8
      3  MDN_TYPE    Numeric           2
      4  AUTHOR      Character       100
      5  PUB_YEAR    Numeric           4
      6  PUB_MONTH   Character        10
      7  TITLE       Character       250
      8  JR_AG_PB    Character       250
      9  PLACE_PB    Character        50
     10  PAGE_NO     Character        50
     11  LD          Logical           1
     12  SI          Logical           1
     13  MR_MI       Logical           1
     14  MR_MO       Logical           1
     15  MR_SP       Logical           1
     16  SED         Logical           1
     17  DEAF        Logical           1
     18  ORTHO       Logical           1
     19  HI          Logical           1
     20  VISU        Logical           1
     21  MULTI       Logical           1
     22  BLIND       Logical           1
     23  DIS         Logical           1
     24  LEVEL       Character         8
     25  ACHE_ED     Logical           1
     26  ED_MEMO     Character       250
     27  ACHE_EMPLY  Logical           1
     28  EMLPY_MEMO  Character       250
     29  ACHE_INDP   Logical           1
     30  INDP_MEMO   Character       250
     31  S_SIZE      Numeric          10
     32  SIZE_MEMO   Character       250
     33  ASSES_SUR   Character       250
     34  KEYWORDS    Character       250
     35  ABSTRACT    Memo             10

** Total **                         2270
```

Table 2.1. Explanation of Variable Fields

1. ACHE_PRI:	This field records the outcome focus of an article. The number 1 is used to indicate educational outcomes, 2, for employment outcomes, and 3, independent living outcomes.
2. IN_DATE:	This field contains date of entry of each review. The standard mm/dd/yy format is used.
3. MDN_TYPE:	This field is used to distinguish the type of media for each article. These are: (1)ERIC documents, (2) articles from professional journals, (3) papers given at conferences (4) unpublished manuscripts, (5) reports from universities, (6) books, (7) a chapter in an edited book, and (8) dissertations or theses. The numbering system allows for the entry of a single digit into the database to indicate which type of document is being recorded.
4. AUTHOR:	This is a character field. The authors' names are entered into the database in the order they appear on the document.
5. PUB_YEAR:	The year of publication.
6. PUB_MONTH:	The month of publication, where appropriate.
7. TITLE:	The title of the document.
8. JR_AG_PB:	This abbreviation stands for journal, agency, or publisher. The name of the professional journal, sponsoring agency, or publishing company is entered into this character field.
9. PLACE_PUB:	The place of publication is recorded here for books or reports from universities.
10. PAGE_NO:	Page numbers of journal articles or chapters in books.
11. LD:	An abbreviation for learning disabilities. A "t" (true) or "f" (false) is entered to indicate whether this specific handicapping condition is discussed in the article. The same procedure is used in the following 12 entries.

12. SI:	Speech impairments.
13. MR_MI:	Mild mental retardation.
14. MR_MO:	Moderate mental retardation.
15. MR_SP:	Severe or profound mental retardation.
16. SED:	Serious emotional disturbance.
17. DEAF:	Hearing impairment and deafness.
18. ORTHO:	Orthopedic handicaps.
19. HI:	Other health impairments.
20. VISU:	Visual handicaps.
21. MULTI:	Multiple handicaps.
22. BLIND:	Deaf-blindness.
23. DIS:	Educationally at risk.
24. LEVEL:	This character field contains the level and location of each individual study. Level includes a local, state, or nationally conducted study. Location indicates the state in which the study was conducted.
25. ACHE_ED:	A "t" (true) or "f" (false) is entered to indicate if the article investigates educational outcomes.
26. ED_MEMO:	The education variables discussed in an article are entered into this memo field.
27. ACHE_EMPLY:	A "t" (true) or "f" (false) is entered to indicate whether the article investigates employment outcomes.
28. EMPLY_MEMO:	The employment variables discussed in an article are entered into this memo field.
29. ACHE_INDP:	A "t" (true) or "f" (false) is entered to indicate whether the article investigates independent living outcomes.
30. INDP_MEMO:	The independent living outcome variables discussed in an article are entered into this memo field.

31. S_SIZE:	Sample size.
32. SIZE_MEMO:	Description of the sample.
33. ASSES_SUR:	The assessment instrument or the method of gathering data is discussed.
34. KEYWORDS:	A number of "keywords" were developed and those deemed appropriate for specific articles were listed, including educational outcomes, employment status, independent living status, postsecondary education, income, follow-up study, transition, vocational preparation, and education/work relationship, among others.
35. ABSTRACT:	This memo field contains an abstract for the articles.

structure and Tables 2.1 for identification and explanation) is designed to facilitate the addition and recall of information. Files include data on outcome areas, sample sizes, survey tools, bibliographical citations (e.g., the author's name, publishing journal, date of publication), as well as any other information such as handicapping conditions and keywords. As a result, the formulation of tables, reference listings, and annotated bibliographies has been simplified.

Data Entry

The database entry system was devised so that we could readily produce references in the American Psychological Association (APA) format for reference lists and bibliographies. To achieve objective, the basic fields such as date, authors, and year of publication are completed for all the document media types.

However, because these references require specific information depending upon the publication type, fields are completed selectively, for example, page numbers, place of publication.

Examples of the entry formats for some of the various media types are presented in Figure 2.2

Figure 2.2. Input Formats

Format for ERIC Document

Record No.	1
ACHE_PRI	1
IN_DATE	03/14/86
MDN_TYPE	1
AUTHOR	Cobb, M., & Crump, W.
PUB_YEAR	1984
PUB_MONTH	
TITLE	Post-school status of young adults identified as learning disabled while enrolled in public schools : A comparison of those enrolled and those not enrolled in learning disabilities programs.
JR_AG_PB	Division of Educational Services, Special Education Programs. (ERIC Document Reproduction Service No. ED 253 029)
PLACE_PB	Washington, DC:
PAGE_NO	

Format for a Journal Article

Record No.	60
ACHE_PRI	2
IN_DATE	06/17/86
MDN_TYPE	2
AUTHOR	Brickey, M. P., Campbell, K. M., & Browning, L. J.
PUB_YEAR	1985
PUB_MONTH	
TITLE	A five year follow-up of sheltered workshop employees placed in competitive jobs, 23,
JR_AG_PB	
PAGE_NO	73-76.

Format for a Paper

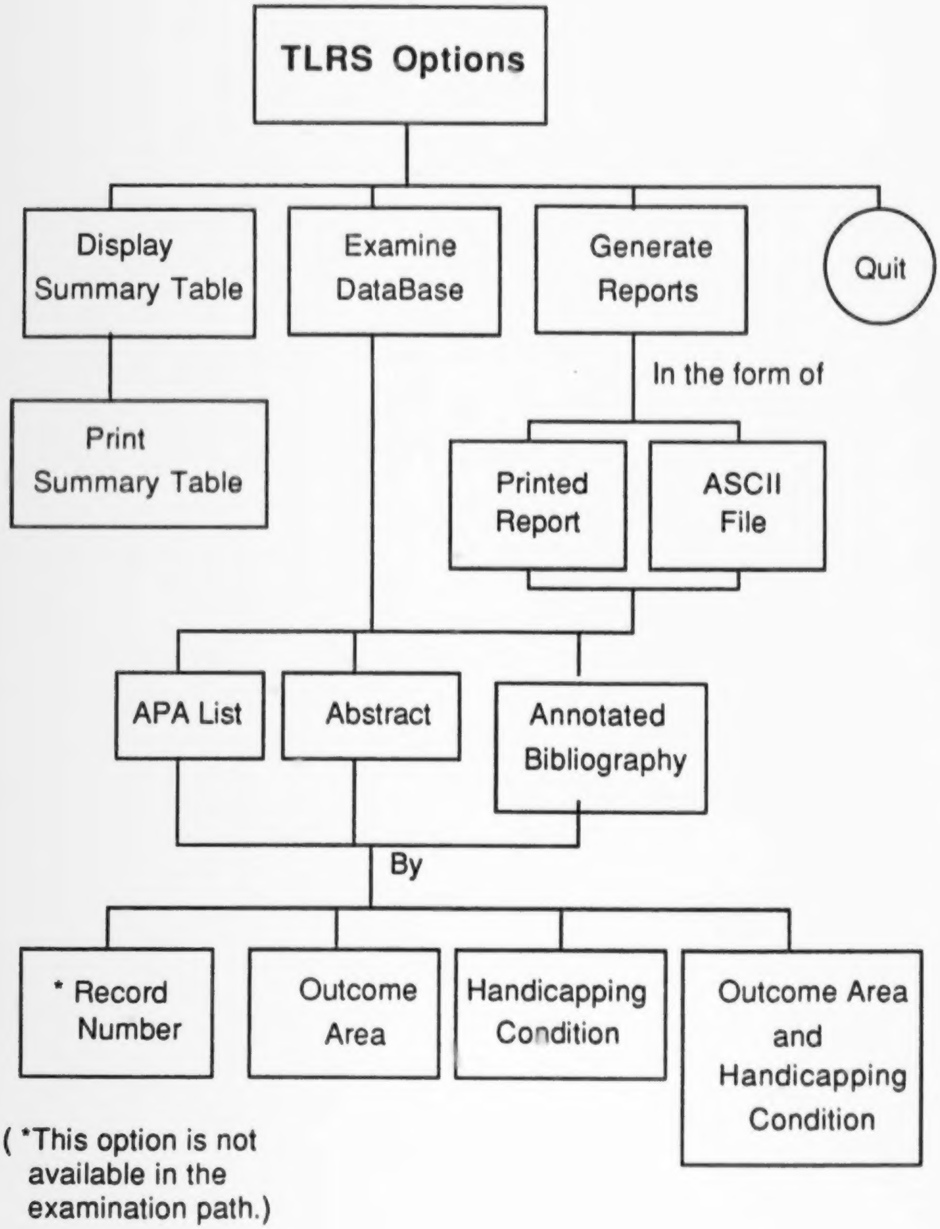
Record No.	140
ACHE_PRI	2
IN_DATE	05/04/87
MDN_TYPE	3
AUTHOR	Fisher, A. T., & Harnisch, D. L.
PUB_YEAR	1987
PUB_MONTH	April
TITLE	Career aspiration models of adolescents and young adults: A comparison on of handicapped and nonhandicapped students.
JR_AG_PB	American Educational Research Association Annual Conference,
PLACE_PUB	Washington, DC.
PAGE_NO	

For all types of publication sources and media types, the remaining variable fields are completed to include the recording of the content information for each of the documents. Thus, one would complete the relevant sections of handicapping conditions included, sample description and size, outcome area of focus, and the abstract. How this information can be used in the selection of articles and production of reference lists is discussed in the Database Management section.

Database Management

An integrated database management system has been developed for the literature review in order to facilitate the data entry, editing, and report generating tasks. (A flowchart of the retrieval system is presented in Figure 2.3). Access to the information in the database requires the use of the dBASE III program which was chosen because of its versatility in adapting to task needs, ease in learning, simplicity of use, capabilities

Figure 2.3. Flowchart of Database Retrieval System


TLRS Options
Display Summary Table
Examine DataBase
Generate Reports
Quit
Print Summary Table
In the form of
Printed Report
ASCII File
APA List
Abstract
Annotated Bibliography
By
* Record Number
Outcome Area
Handicapping Condition
Outcome Area and Handicapping Condition
(*This option is not available in the examination path.)

for manipulation of data, and its ability to interface with other systems and software programs.

The files for the database are accessed through the use of the dBASE III program. One must have that program installed on a hard disk in the computer before being able to call up the menus that have been incorporated into the database to complete the various tasks. Once the Transition Database Retrieval program is also installed (see the User's Manual that accompanies the program disks for installation instructions), type "TLRS" to access the program.

After the introductory section appears on the screen, you can move to the main selection menu (see Figure 2.4). The main menu contains three task codes options: "E" (examination) allows the user to study the database on the screen; "R" (report generation) enables the user to generate reports; or "Q" (quit) enables the user to exit the system. It is from this menu that

Figure 2.4. Screen Display of Main Menu

```
  ***************
  ** Main Menu **
  ***************

E - EXAMINE DATABASE

R - GENERATE REPORTS

Q - QUIT

YOUR CHOICE :
```

the user selects the desired operation and enters one of the task codes after the prompt "Your Choice."

When the report generation or the examination option is selected, a sequence of menus appears and requires responses. The sequence in which the menus appear and the options that are available are the same for generate report and examine, except that when the option to generate a report is selected, the first menu that appears requests the user to select the type of output that is required (see Figure 2.5). The choices are to print a hard copy or to create an ASCII file. An ASCII file is useful for those who want to incorporate the output into word processing text. (Most of the tables and Appendixes B, C, and D of this volume were generated and then modified in the word processing program.)

<u>Figure 2.5</u>. <u>Print Option Output Selections</u>

```
******************************
* CHOOSE THE TYPE OF OUTPUT *
******************************

P    -     TO PRINTER

A    -     TO ASCII FILE

Q    -     RETURN TO MAIN MENU

     YOUR CHOICE  :
```

The next menu that appears, the output format menu, is common to both the examine and report options. (See Figure 2.6.) The options in this menu allow one to produce: "I" an APA-style list of references, "A" the reference plus abstract, or "B" the reference, abstract, and the handicapping conditions discussed and the keywords of the articles.

Figure 2.6. Output Format Menu

```
                **********************
                *** Report Format ***
                **********************

           I  -  APA-STYLE CITATION LIST

           A  -  ABSTRACT

           B  -  ANNOTATED BIBLIOGRAPHY

           Q  -  RETURN TO MAIN MENU

                 YOUR CHOICE  :
```

Once the report format has been selected, the user is asked to indicate which records are to be included in the output by selecting the appropriate record classification (see Figure 2.7). The options allow the user to access reports on handicapping conditions, outcome areas, or a combination of both of these. Selection of these options are left to the user to be tailored to their needs for accessing information from the database.

When one chooses an option from this screen, another menu will appear to narrow the selection of database output to the most appropriate records. If the outcome area classification is requested, there is a choice of three outcomes by which records

Figure 2.7. Record Classification Menu

```
                    ************************************
                    * CHOOSE THE RECORD CLASSIFICATION *
                    ************************************

                    N    -    RECORD NUMBER

                    O    -    OUTCOME AREA

                    H    -    HANDICAPPING CONDITION

                    B    -    OUTCOME AREA & HANDICAPPING CONDITION

                    Q    -    RETURN TO MAIN MENU

                              YOUR CHOICE  :
```

were classified: education, employment, or independent living (see Figure 2.8). The report type chosen would then be produced for the selected outcome.

Figure 2.8. Outcome Area Menu

```
                  ***************************
                  * CHOOSE THE OUTCOME AREA *
                  ***************************

                  X    -    EDUCATIONAL

                  Y    -    EMPLOYMENT

                  Z    -    INDEPENDENT LIVING

                  Q    -    RETURN TO RETURN FORMAT MENU
                         YOUR CHOICE  :
```

Selection of record number allows the user to retrieve the relevant information from a selected range of articles depending upon their record numbers in the database files. (See Figure 2.9.)

Figure 2.9. Record Number Menu

```
**********************************
* CHOOSE THE RANGE OF RECORDS    *
**********************************

FROM RECORD NUMBER:          0

TO RECORD NUMBER:            0

(To print a single record, type the same number.)

(To indicate the last record, type 999.)

(To return to report format menu, enter 0 in both
  blanks.)
```

Selection of handicapping condition is a way to access information from articles that deal with populations in which a person may have a specific interest. Use of this option produces the menu shown in Figure 2.10, which lists the 12 handicapping conditions specified in P.L. 94-142, plus students educationally at risk, a primary method of categorizing articles for entry into the database and the literature review.

The remaining option is a combination of the outcome area and handicapping condition. When one chooses this option, the summary table matrix is shown on the screen (Figure 2.11). In this menu, the user indicates the number of the handicapping condition, and then the letter for the particular outcome area.

Figure 2.10. Handicapping Condition Menu

```
                ***********************************
                * CHOOSE A HANDICAPPING CONDITION *
                ***********************************

               1     -      Learning Disabilities
               2     -      Speech Impairment
               3     -      Mental Retardation: Mild
               4     -      Mental Retardation: Moderate
               5     -      Mental Retardation: Severe/Profound
               6     -      Serious Emotional Disturbance
               7     -      Hearing Impairment and Deafness
               8     -      Orthopedic Handicaps
               9     -      Other Health Impairment
              10     -      Visual Handicaps
              11     -      Multiple Handicaps
              12     -      Deaf-blindness
              13     -      Educationally at Risk

                     YOUR CHOICE  :          0
(To return to report format menu, enter 0.)
```

This option can be the most important of those in the database retrieval system, because it allows the user to choose article information on an outcome area and a handicapping condition (for example, the educational outcomes of students with learning disabilities).

Conclusion

The database retrieval system is designed to facilitate access to the information contained in the Transition Literature Database. The database is seen as a major informational resource for those

Figure 2.11. Handicapping Condition by Outcome Area Menu

```
   HANDICAPPING                              EDUCATIONAL  EMPLOYMENT  INDEPENDENT
    CONDITION                                  OUTCOME      OUTCOME      LIVING

 1 Learning Disabilities                          51           47          13
 2 Speech Impairment                              18           26           8
 3 Mental Retardation: Mild                       21           65          45
 4 Mental Retardation: Moderate                   15           64          40
 5 Mental Retardation: Severe/Profound            13           57          36
 6 Serious Emotional Disturbance                  18           40          14
 7 Hearing Impairment and Deafness                28           38          10
 8 Orthopedic Handicaps                           17           43          15
 9 Other Health Impairment                        12           27          11
10 Visual Handicaps                               18           32          13
11 Multiple Handicaps                             13           34          14
12 Deaf-blindness                                 10           16           8
13 Educationally at Risk                          9            15           4
                                                 ---          ---         ---
          TOTAL :                                243          496         234
                                                 (X)          (Y)         (Z)

ENTER A NUMBER TO CHOOSE A HANDICAPPING CONDITION
ENTER X, Y, OR Z TO CHOOSE AN OUTCOME AREA
```

who work in transition issues. It now contains close to 300 reviews and summaries of research articles which many people need for their research and knowledge building purposes. By making the database retrieval system available to them, we have reached our goal of making the database a system accessible to many users.

Generally speaking, this system is designed for an individual who knows little about the dBASE program. A disk that contains all of the existing records, the programs necessary to run the retrieval system, and a manual illustrating how to use the system can be requested by completing the form on the back page of this volume. An IBM or compatible computer, at least 1.5 megabytes of free space on a hard disk, with a copy of the dBASE III or dBRUN III+ program are necessary to use this system, but no specific training is required in the use of a computer other than being able to press the correct keys to select from the menus.

3

Research Methods in Transition Literature

Delwyn L. Harnisch, Adrian T. Fisher, and Michael L. Connell

In reading and evaluating research articles and their findings, we must become acquainted with the factors that contribute to the results or that can hide the true reasons from the findings. We must be aware of how the research was carried out -- the methods used, whether these methods were appropriate to the research questions addressed, who the subjects were, and the implications of the research findings. Although most transition studies are conducted using quasi-experimental designs, the reader should be aware of the various types of studies that can be constructed and the implication of using each of these types of studies in their professional activities.

Correct reading and interpretation of research articles have implications for both applied and research areas, because the results of these studies can guide many forms of decision making. For those who make policy, there is the need to build up a consistent basis of research which can explore the theories to explain actions as well as to define the underlying nature of problems that have been identified. In contrast to a single experiment or case study, a well-conducted program of research contributes much to the knowledge base.

Teachers and those who work in educational and other service agencies often use the results of applied studies to help them in the development and implementation of new curricula and service delivery methods. There is a serious need for these people to understand the potential strengths and weaknesses of the studies utilized and to know if the study results ruled out extraneous factors so that those results are applicable to the reader's clients and settings. With this understanding in place, potential applications of the technology, services, type of interventions, and outcomes of the study can be examined systematically.

Rather than focusing on statistical issues or conceptual frameworks as corrective mechanisms, the first part of this chapter describes several common types of research studies and the threats to their validity. We will then describe how the evidential base may be broadened, how diverse sources of evidence can be combined to strengthen causal inferences, and the role of judgment within quasi-experimentation.

Common Threats in Empirical Studies

Two major factors should always be considered when looking at the studies described in this volume and other research reports. First, those issues internal to the study and the methods used in conducting the study itself will be discussed, and then those issues arising when attempting to use the results of the study with other groups or in other places. These two factors are referred to respectively as the internal and external (or generalizability) validity of a study. The various factors that can lessen either of these in a study are called threats to validity.

In examining the internal validity of an experiment, we are attempting to find out whether the results occurred because of the intervention used or because of some unconsidered factors during the experiment. In attempting this, one should always consider how events other than the planned intervention might affect the results of the experiment. For example, the subjects' normal development (e.g., growing older, stronger) may not be a part of the formal experiment, but can affect the results.

External validity is a determination of the extent to which an experiment's conclusions are transferrable to other subjects and settings. Examining the external validity of a study is crucial for the use of research findings to develop educational programs, approaches, or curriculum materials. If the subjects or the study setting is not comparable, then the results may not transfer to others.

Threats to internal and external validity are always present and must be controlled in every study; and every well-designed study attempts to achieve the optimum balance between what one would ideally need to do to control these threats and what one can actually do in a real world setting. However, as real world events often dictate the actual conduct of studies, it is important to remember that the research designs reflect various compromises between and among these issues.

Every study is conducted according to a plan or research design that specifies the information to be gathered, how it will be gathered, and selection and assignments of subjects to groups. Usually, one would first construct a hypothesis to investigate. This hypothesis can be a simple statement in which we predict that if we do one thing (e.g., introduce a new curriculum), then there will be a certain outcome for the subjects (e.g., an improvement in test scores). This statement can be described as "If X, then Y"; in this statement, X is the intervention, treatment, or change and is termed the independent variable, while Y is the outcome or dependent variable.

After the formulation of an observable hypothesis, the experimental conditions (*independent variables*) are specified together with any identifiable nuisance factors (threats to validity) that might interfere with the experiment. With these items identified, the number of subjects, the populations from which the subjects are taken, and the assignment of selected subjects into experimental groups are determined. Finally, the measurements to be recorded for each subject and the analyses to be performed are specified.

Internal Validity. The researcher selects one of the alternative research designs to control as many of the identified nuisance variables as possible, while increasing the power of the measurements being made. In selecting a design, the manner in which subjects are selected or assigned to groups should be carefully examined. Likewise, the experiences of the subjects after assignment to treatments should be examined. For example, consider the impact which newly mandated programs might have upon already existing experiments. A federally mandated curriculum which would require utilizing word processors for high school students with learning disabilities could very easily invalidate existing experiments investigating the effectiveness of technology use for this population. Observed differences may reflect pre-existing differences between the subjects assigned to the various experimental treatments rather than experimental effects. Random assignment to groups, for example, is characteristic of "true" experimental designs, as it controls many threats to internal validity by eliminating selection bias.

The environment in which the experiment is conducted plays an important role in determining the experiment's internal validity. In some studies, information may be selectively presented to subjects in the experimental group, but not to others. If the subjects in the different groups are able to communicate with one another, they may share that information, and then experimental differences may be compromised. Actions of people outside the experiment can also serve to damage internal validity. For example, a teacher not included in the intervention portion of the experiment may provide special tutoring to students in a control group who are observed to be falling behind those in the experimental program.

An example illustrating how this may be examined is provided by Edgar in a 1988 grant proposal submitted to OSERS. In this proposed study, 100 students identified as being potentially at risk are randomly assigned to one of three conditions: a case management system, a mentor program, or a peer social group. Environmental effects are monitored through collection of a wide variety of longitudinal post-school variables from interviews with a representative sample from the surrounding area and the population of special education students.

Edgar describes the value of utilizing multiple data points to increase the accuracy of the student profile over time. Some of the additional data points for utilization in this study include the rate of chronic absenteeism, number and nature of suspensions, and the number and type of academic credits earned. To further capture the influence of environmental factors on the subjects, it was proposed that the data collection phase of the experiment would begin while the subjects were still in the early years of their scholastic career.

Other threats to internal validity are directly related to the methods used in the experiment. For example, reliance upon repeated testing using the same type of evaluation often results in subjects learning the test itself rather than the subject matter, which in turn affects the experimental outcome. Observed findings may also reflect the addition or loss of subjects during the experiment rather than the experiment itself. A commonly occurring statistically based threat to internal validity is regression. Regression, in this sense, is used to describe the statistical drift of extreme scores towards the group average score; that is, individuals who have extreme scores at first testing, statistically tend to have scores that are less extreme upon subsequent testing.

External Validity. A common threat to external validity lies in improperly selecting the outcome measure, the dependent variable. Care must be taken to ensure that the outcome measures selected provide the closest match between theory and practice. Another obstacle to external validity lies in determining the population to be used and the extent to which results from that population can be generalized. This part of the experiment can break down in at least three points: defining the population to be used, identifying and locating its members, and sampling adequately from those members who have been located. If the population cannot be defined, adequately sampled, or located, then logically the results of a study apply only to the cooperating sample studied.

An important extension of external validity is ecological validity. This concern must be addressed if the findings of an experimental study are to be applied to real life settings. Often experimental findings are based upon artificial samples of places, times, or social demands. When the participants or results of such studies are transferred to real life settings, the experiences break down.

Studies concerning the long-term effects of social skill training on placement in deinstitutionalized settings serve as prime examples of the need to be aware of ecological validity. Keith, Schalock, and Hoffman (1986) and Schalock (1986) reported that the subjects found to have the most successful transition, as measured by the need to be returned to a more restrictive living environment, were those coming from the transition training programs that most closely approximated community life. Conversely, those subjects who received social skill training in a restrictive environment which did not approximate the experiences and demands of actual real life settings had less successful transitions to community living and were more likely to be returned to institutions.

The myriad threats to validity and reliability must be balanced against the practicality of conducting studies in the real world through utilization of the various ways in which research can be conducted. Today, researchers have the option of selecting from a broad number of potential alternative experimental designs. Some of these designs rely on a restricted range of subjects and measures, whereas other designs are able to make use of the tight validity control that is inherent in the so-called true experimental designs.

True Experimental Design

True experimental designs make use of a comparison technique in which at least one group of subjects, the experimental group, receives some treatment (e.g., a new training curriculum). At least one other group, the control group, continue to receive the normal treatment (e.g., the current curriculum). Each group of subjects is measured on the outcome variables before the intervention to provide a baseline for comparison and are measured again after the intervention to assess what changes may have occurred. Although many other research designs utilize control groups to help assess the impact of new treatments, true experiments are characterized by random assignment of subjects to the various experimental and control groups.

In the simplest type of experimental design, often referred to as a completely randomized design, the subjects constituting the experimental and the control groups do so on random assignment of treatment levels. That is, each subject has an equal chance of being assigned to an experimental group and to a control group. There are no imposed restrictions on the random assignment other than the option of assigning each treatment level to the same number of subjects.

A slightly more complicated design uses an initial blocking procedure to deal with an identified nuisance variable. In many research studies, the subjects are people with markedly differing attitudes, experiences, and abilities which may have an impact upon the results of the intervention. Although such differences will often be present, they may be dealt with through use of appropriate blocking of groups. For example, in examining the effectiveness of a proposed curriculum, it might be helpful to place all subjects with high test scores in one subgroup, those with medium scores in another, and those with low scores in a third. Once the blocks are created, the subjects within each are then randomly assigned to experimental or control groups.

Other commonly used blocking procedures include the use of gender, handicapping conditions, and severity of handicaps. Designs that use this approach are referred to as completely randomized block designs.

There are many other true experimental designs available, each offering a slightly different set of advantages and trade-offs. Authors should take the responsiblity to identify clearly the experimental design used so that readers can utilize this design information in their evaluation of the research. For example, Heal, Colson, and Cross (1984) include a thorough discussion of both the experimental design and subsequent analysis in their study of training effects for students with severe mental retardation.

Quasi-Experimental Designs

Quasi-experimental designs are found in the majority of transition studies. They do, however, reflect more significant compromises between validity controls and practicality when compared to the more formal true experimental designs. Research comparing alternative treatments provides a stronger basis for inference about the effects of the interventions if it is conducted with the use of true experimental designs based on random assignment to groups.

Under the quasi-experimental heading there is a wide variety of different research designs. Some of these designs closely resemble true experimental designs, except that they do not use random assignment of subjects to groups. Other quasi-experimental designs may use only one group and limited testing.

One-Group Posttest-Only Design. In studies using this design, the planned intervention is performed, then an outcome measurement is collected and analyzed. There is no measure of the level of achievement before the intervention, nor is there any group against which to compare the results for those in the experimental group.

This approach was used by Dalke and Schmitt (1987) in their study of academic preparedness and college skill transition training methods for students with learning disabilities. In this study, after participation in a special summer program, the subjects were given a 17-point questionnaire and their student diagnostic profiles were re-evaluated.

Like the other quasi-experimental designs, this design cannot confirm causal relationships. No pretests are given, and as a result no comparisons are made with control groups or other groups receiving alternative treatments. The absence of a comparison of groups to alternative groups and lack of baseline data are fundamental weaknesses of this design. Without these comparisons, we cannot be certain that the intervention caused the changes -- or if, indeed, there was any change at all.

An additional significant weakness is the lack of control for selection biases. This design is most appropriate only for simple descriptive studies, as there are no satisfactory controls for threats to internal validity, especially selection biases.

One-Group Pretest-Posttest Design. In studies of this type, subject performance is measured on the dependent variable before performing the intervention. The intervention is conducted and performance is then measured again on the dependent variable. As with the one-group posttest-only method, there is no group against which the researcher is able to compare the results of the intervention.

The addition of a pretest assessment provides an improvement over the posttest-only design. Comparisons of changes in the assessment results allow evaluation of changes in the dependent variable. However, statements regarding treatment effect cannot be supported. Although the pretest measurement provides a baseline of performance making it possible to detect change, threats to internal validity are not adequately controlled by the use of a single group.

Comparison-Group Pretest-Posttest Design. Addition of pretest measures strengthens internal validity by partially controlling some extraneous variables. Inclusion of both a pretest and a comparison group can increase interpretability of treatment effects, even when there is no attempt to make the members of the two groups comparable on many salient variables.

This method was followed by Collins, Engen-Wedin, Margolis, and Price (1987), who used data from three sections of a writing class using word processors. The classrooms from which the subjects were drawn contained 22 students with learning disabilities and 52 without, forming the basis for creating two comparison groups. In their analysis, the authors assessed writing assignments before and after the intervention to measure the outcomes.

Group posttest differences can now be compared more readily. To some extent, we are able to use these data to evaluate the extent to which the intervention itself has been effective. However, because this type of study does not use a control group that matches the experimental group, it is difficult to say whether the findings resulted from the intervention or from factors more related to the subjects themselves.

Prematched Control Group Design. In this design, treatment and control groups are matched after pretest evaluations and then the intervention is implemented. Such matching may be performed on the basis of handicapping conditions, test results or other common elements. Treatment effects are assessed by comparing posttest scores, or the change in scores between the pretest and posttest for each group.

Two possible flaws are especially threatening to prematched control group designs: selection interactions and statistical regression. Although the groups had been assessed and matched for equivalence, one cannot assume the entire array of relevant variables had been held constant. Posttest differences could be explained by invoking interactions of such factors as maturation and history. The greatest threat to the validity of the matched group design is statistical regression. In this sense, regression is used to describe the statistical drift of extreme scores toward the population average; that is, statistically, individuals who have extreme scores at the first testing tend to have scores that are less extreme upon subsequent testing.

Natural Experiments. Studies using naturalistic designs are typically utilized in the course of hypothesis discovery. Numerous questions are asked, and descriptive analyses are completed in an effort to discover associations among variables. The associations are interpreted, and hypotheses of causation are proposed.

Goldberg's (1987) study of coping strategies used by students with learning disabilities provides a good example of this style of inquiry. This exploratory study used a wide variety of psychoeducational assessments, interview data, and examination of work products in providing descriptive data about students with learning disabilities.

It should be noted that a related research technique, often described as naturalistic, has been developed in the fields of ethnology and anthropology. This technique involves observing people in their natural environment as unobtrusively as possible. It differs from the surveys and direct observations described here in that the measures used are often developed as part of the observation procedure.

Longitudinal. Longitudinal research might be viewed as a form of the one-group pretest-posttest design. The first step in this method involves measurement of subject performance on an outcome measure. After the establishment of this baseline, either an actual intervention is offered, time is allowed for natural development to occur, or both. At the end of a specified time period, group subject performance is again determined for the outcome measurements. This type of study is important for understanding the long-term impact of interventions on those who received them. This design suffers from the threats to internal validity outlined in the one-group pretest-posttest design section. Bierley and Manley (1980) used this approach in their investigations of 10 participating students in Wright State University's program for individuals with learning disabilities over the first two years of the program. The outcome measures used in this case consisted of rates of retention, grade point average, and numbers leaving the university.

Cross-Sectional. In cross-sectional research a sample is drawn from the population of interest, and selected outcome measurements are obtained. After the passage of time a second sample (not necessarily consisting of the same members as the first sample) is drawn, and the desired measurements are again taken.

An example of this research technique is found in Allen (1986), who analyzed the data on the performance of students with hearing impairments collected across the United States during two major norming studies. Although the two groups did not include the same subjects, his analyses of these data provide helpful information concerning the relative performances of these groups of students over the past 10 years.

Case Study and Single Subject Designs. Designs of this type consist of intense, detailed description and analysis of a single individual, a project, a program, or an instructional material in the context of its environment. By their very nature, these designs control most threats to internal validity. Selection bias is perfectly controlled in that the experimental and the control conditions are present in the same subject. History is controlled by repeating intervention and baseline alterations or by varying the time at which intervention begins in different areas. Maturation is assessed by ongoing measurements; intervention effects can be seen against the baseline of growth or degeneration, if any. Regression effects are controlled by extending baseline measurements until they become stabilized about their "true score" values. Measurement bias and reactivity form serious threats to these designs. Especially problematic is the repeated measure by an experimenter who knows his subject extremely well.

The major drawback of these studies is the threat to external validity. Because there is only one subject examined at a time, there is no way to equate the results to others. Thus, there is a limitation to the use of the described procedures in dealing with other subjects. Another concern is the threat to internal validity known as the Hawthorne effect, which indicates that observed changes result from attempts of the subjects to respond to the experimenter rather than from the interventions.

Meta-Analysis. The strategy of meta-analyses is to combine the results of all studies that have tested essentially the same hypothesis. Meta-analysis can be conducted statistically by converting the reported statistics to a common metric for reanalysis, or in the more common form of an extensive, critical literature review.

A serious disadvantage of this technique is the great difficulty in maintaining internal and external validity. For external validity, the meta-analysis must identify the population of studies that have tested a particular hypothesis. Published studies are almost certainly biased in favor of those in which a significant effect was found, and the extent of this bias cannot be estimated. Regarding internal validity, the meta-analysis must combine the results from studies whose procedures and statistical approaches varied greatly from one another.

Despite its difficulties when viewed as a scientific method, meta-analysis is a more objective and public procedure than the integrative literature review and can result in some valuable synthesis of information, as is evidenced in the work of Cook, Scruggs, Mastropieri, and Casto (1986) who conducted a meta-analysis of available research documenting the effectiveness of using students with handicaps as the tutors of other students. Implications for instruction and further research from this analysis were provided.

Information Gathering Techniques

Regardless of whether a study employed a true or quasi-experimental design, there are many techniques and methods for gathering the outcome measurements. A number of studies are described as examples showing effective use of data gathering tools which may be used in a wide variety of inquiry.

Salend and Fradd (1986) provide an excellent example of the use of survey data in an educational study. Data were gathered through the use of a survey questionnaire and follow-up telephone calls to the Commissioners of Education in each of the 50 states and the District of Columbia. Despite the difficulty inherent in surveys of getting a high participation rate, Salend and Fradd's results were based on 50 of the 51 Commissioners surveyed, with only the Commissioner of Mississippi declining to participate.

Another use of survey data may combine a number of the methods described above. Fisher and Harnisch (1987) used data from the High School and Beyond survey in a longitudinal study to examine over time the career aspirations of youth with and without handicaps, to examine the differences between the two groups, and to examine the changes that occurred over time. Thus, it was a pretest-posttest, nonequivalent comparison group study.

Other uses of survey data such as High School and Beyond are for testing of theories and development of hypotheses which can later be used in applied settings to develop programs or components. The procedures of principal-components analysis, factor analysis, and their many variations are often utilized to allow investigators to determine which of a large number of variables cluster together to form a smaller number of dimensions. Once these clusters are known, they provide target areas for the development of applied strategies and further research questions.

Other types of archival data, such as grades, medical records, and case histories, are important and are often utilized. For example, Friedrich, Fuller, and Davis (1984) used approximately 1,600 student referrals in investigating the discriminating power of 96 empirically derived formulas for assessment of learning disability. Data of this type can help provide a more general discussion of subjects and provide the basis for the construction of groups for discussion purposes.

Expanding the Evidential Base

Although the above discussion has dealt with various ways in which empirical research studies can be conducted, the major approach is quasi-experimentation. The consideration of threats to validity aids in the interpretation and use of information from such studies, but there are technical and conceptual advances in quasi-experimentation that provide a more significant basis for the interpretation and limitations of these designs.

Methods of statistical analysis have become increasingly sophisticated, allowing us to estimate parameters in complex cause and effect models. Moreover, owing to improved diagnostic tests, our ability to determine if (and how well) data fit these models has also been greatly enhanced. To offset further the other imperfections in quasi-experimental analysis of causal relations, the use of multiple strategies (e.g., methods, measures, analysts) has been widely advocated.

Despite this continuous parade of advances, evaluations following the quasi-experimental paradigm continue to exhibit its serious flaws. Although it is reasonable to expect that some fraction of studies will be inadequate, the transition literature appears to contain a disproportionate number of poor studies. Few of the studies reviewed are relevant, credible, and reported well enough to be used to examine policy issues concerned with the effects of specific intervention programs.

These reported weaknesses are not isolated in particular substantive areas (Gilbert, Light, & Mosteller, 1975; Lipsey, Crosse, Dunkle, Pollard, & Stobart, 1985). They have been reported in assessments of evaluations of youth employment training programs

(Betsey, Hollister, & Papageorgious, 1985), education (Boruch & Cordray, 1980), maternal and child health (Shadish & Reis, 1984), and in juvenile justice (Maltz, Gordon, McDowall, & McCleary, 1980). The relatively high incidence of technically poor studies is not a trivial problem and poses a serious threat to the reputation of the field.

What factors have contributed to this state of affairs? Some programs may not have been well enough developed for meaningful experimentation. Studies included in the reviews may have been planned and conducted long before sophisticated technology was available. It may be that we are expecting too much of social science methods; that is, they may be inherently too crude to match the complexity of social programs. Another reason may be that as a profession, we simply may not have learned when and how to conduct these assessments properly. Each of these reasons contributes to understanding the problem a bit better while implying a different set of solutions.

The effects of intervention were evaluated initially with an experiment in which the effects of the intervention were assessed. Evaluations followed this perspective (input-output assessment) in large part because of the conceptual simplicity of the process of developing and summarizing information. Evaluation plans following this perspective were relatively simple with features of: (a) selecting suitable measures, (b) devising an assignment plan, and (c) managing the implementation of these key features. Inference about program effects was to flow from tests of statistical significance that were applied to data derived from randomized experiments. The development and synthesis of evidence about program effectiveness using the experimental paradigm implicitly mixes these two processes, thus removing the need for judgment on the part of the researcher.

Despite forceful warnings of inferential weaknesses (Campbell & Boruch, 1975; Cook & Campbell, 1979), quasi-experiments have been treated merely as impoverished versions of true experiments, the chief difference being the lack of random allocation to conditions. In contrast to the probing, searching, active testing of the plausible effects of rival explanations described by Campbell and his co-workers (Campbell, 1969, 1984; Campbell & Stanley, 1966; Cook & Campbell, 1979), early studies seemed to focus on attempts to find approximate statistical models to control for influence of pretreatment differences. Kenney (1975) points out that chance is only one rival explanation.

Two problems are obvious from such analyses. First, early evaluations using quasi-experiments employed a very limited notion of what constituted evidence about a program's effectiveness. Evidence of program effectiveness was limited largely to establishment of one fact: Did the treatment group outperform the control group? A test of statistical significance was usually presented in support of a claim. However, several intermediate facts must be established before a causal claim can be justified.

For example, were the conditions necessary for change present? Was the appropriate clientele exposed to the intervention? Was the intervention properly implemented? Was the intervention implemented with sufficient intensity to trigger the causal chain of events necessary to induce a change in behavior? Each of these questions requires that we decompose the treatment package into its elements. Judging from the reviews of the literature (Harnisch, Chaplin, Fisher, & Tu, 1986; Harnisch, Fisher, Kacmarek, & DeStefano, 1987; Lipsey et al., 1985), explorations of the black box of program treatments are relatively rare.

Second, present-day quasi-experimental analysis assumes a passive posture toward the development and synthesis of evidence about causal claims. This posture is manifest in three widespread beliefs: first, that nonequivalent group designs can and do control for threats to validity; second, that statistical procedures (for example, tests of significance, adjustments for nonequivalence) perform as intended; and third, that assumptions are robust enough to be safely ignored. To augment this analysis, one rarely sees discussion on the adequacy of the statistical design for an evaluation, while the assumptions are often stated as caveats rather than being probed with additional design elements.

Judgment Within Quasi-Experimentation

A review of the empirical literature seems to indicate that the role of judgment within quasi-experimentation has neither been fully acknowledged nor properly employed in practice. Herein lies a fundamental problem in current quasi-experimental analysis.

When evaluating the logic of evidence used for testing cause-effect relationships, it is generally believed that causal relationships are established if three conditions hold. First, the purported cause (X) precedes the effect (Y); second, X covaries with Y; third, all other rival explanations are implausible. In an ideal case where these conditions are met, they allow us to state a fact (the treatment caused an increase in performance) with the separate effects of artifacts held in check. The third condition plays an especially important role in causal inference. The credibility of evidence about a causal claim is greatest when no plausible alternative explanation can be invoked, and is lower when such alternatives are available. Causal inferences derived from quasi-experimental analyses rarely satisfy this condition; that is, the internal validity of the inference is always suspect.

Our view of causal evidence is inherently limited if the most distinctive feature of causal analysis is the need to discount the influence of other factors. Einhorn and Hogarth (1986) liken the diagnostic value of discounting other explanations to the case of the mystery writer who reveals only who did not commit the crime. Similarly, covariation of cause and effect is too simplistic a criterion when X is part of a complex set of factors that influence Y. And, although X must occur before Y occurs, temporal contiguity is low or ambiguous in many field applications. Therefore, although the classic criteria for establishing causal relationships may be adequate guides for the development of evidence in relatively closed systems, a more comprehensive set of guiding principles is needed for quasi-experimental analysis in open systems like program research on handicapped populations.

If we grant that the criteria for establishing causal relationships are impoverished, the question then becomes: On what grounds can we derive a more comprehensive notion of evidence within quasi-experimental assessment? One way of approaching this question is examining the judgmental tasks that an analyst must perform. In actual practice, quasi-experimental analysis falls somewhere between pure reliance on scientific methods and pure human judgment. A reasonable set of principles on evidence within quasi-experimentation must take this mixture of methodology and judgment into account. In particular, issues about evidence appear in two distinct tasks: the development of a data acquisition plan and the synthesis or combination of evidence into a coherent set of results. In both tasks, the analyst exerts considerable discretion over the evidence to be included, its completeness and relevance, and how it should be combined and presented in making a summary judgment about the strength of the causal relationship.

The analyst is often required to derive conclusions about the effects of an intervention by piecing together numerous bits of information accumulated by multiple methods -- a process akin to Sherlock Holmes's investigative tactics (Larson & Kaplan, 1981;

Leamer, 1978). Because many issues implied by these practices fall outside the domain of classical statistical theory, the literature has been largely mute regarding solutions to these combinatorial procedures. Those who have begun to grapple with these issues (Fennessey, 1976; Finney, 1974; Gilbert et al., 1976) identify many problems faced by users of multimethod strategies, for example, nonindependence of evidence and the resulting overconfidence in conclusions, judgments about the differential credibility of evidence, and data-instigated specification searches. The questions then become: How can complex and diverse sources of evidence be combined to form an overall judgment of the strength of a causal relationship for a transition program? Are some intuitively appealing transition procedures subject to inferential difficulties? The answers to these questions depend on the types of methodologies that are employed and on the degree to which human judgment is involved.

We begin by examining the systematic rules that people use in judging ordinary causal relations. Judgment plays a central role in quasi-experimental analysis. For example, an examination of the evidence on stereotypical biases or flaws that individuals exhibit can lead to corrective solutions on the development and synthesis tasks. The results of an analysis in applied research are often intended to be used by others, such as policymakers. Having an understanding of the way in which causal evidence is interpreted can also help to ensure that the evidence that is developed is maximally credible and useful.

Einhorn and Hogarth's (1986) review of the literature on judging probable cause asserts that scientific and ordinary causal inferences are made both within the context of a causal field and in light of existing interrelationships among several cues-to-causality (that is, temporal order, distinctiveness, strength of the causal chain, covariation, congruity, and contiguity). When these factors are combined, they determine the perception of the overall gross strength of the causal relation. The Einhorn and Hogarth formulation of the psychology of judging probable cause has several important implications for the ways in which we conduct and disclose our formal causal assessments of the effects of interventions. First, the relevance of a particular causal explanation (the treatment of rival explanation) depends critically on its role within a causal field, that is, on a specified set of contextual factors. The causal field sets the context for interpretation of difference among variables and deviations from expectation or steady states, and limits or expands the number and salience of alternative explanations. For a cause to be plausible, its distinctiveness from the background must be considered within the particular causal field. For program research with special populations, this means that the strength and fidelity of the treatment (relative to no-treatment conditions) must be determined, which is rarely done in practice (Scheirer & Rezmovic, 1983).

The Einhorn and Hogarth (1986) model suggests that covariation need not be perfect in order to instigate a causal inference. They express the complex scenario where X is a necessary but not a sufficient part of the complex scenario that is itself unnecessary but sufficient to produce Y; this means that other causes of Y exist and only a specific set of conditions conjoins with X to produce Y in a given causal field. What these conditions are in practice depends on the program model, the theory and the particulars of the setting.

The criteria of this model differ from the classical criteria in their explicit recognition of the need to establish causal chains to account for overall strength of the relationship. Within this notion are two interdependent factors, contiguity and congruity. Contiguity refers to the extent to which events are contiguous in time and space. When contiguity is low (for example, when substantial time elapses between the presence of X and the appearance of Y), a causal relation is difficult to justify unless intermediate causal models are established to link the events. Congruity refers to the similarity of the strength (or duration) of cause and effect. In simplest form, the notion of congruity implies that strong causes produce strong effects and weak causes produce weak effects. This explanation, of course, is too simple. To account for seemingly anomalous relations (for example, small causes producing big effects), additional processes must be specified that justify how the cause must have been amplified (large effect, given a small cause) or dampened (small effect, given a large cause) to produce the observed magnitude of effect.

When considered together, contiguity and congruity form the basis for specifying the length of the causal chain necessary to link X with Y. When both are high, few if any links are needed. When congruity is low and contiguity is high, the mechanisms that dampen or amplify the effect must be considered; similarly, in the reverse case, links that bridge the contiguity gap are necessary. The most complex case is that in which both contiguity and congruity are low. Here, intermediate causal links are needed both to bridge the temporal gap and to represent the amplification or the dampening process.

Implications for Quasi-Experimental Designs in Transition Studies

The psychology of judging probable cause makes it clear that the types of evidence brought to bear in causal analysis cannot be limited to the simplistic input-output conception suggested by the three classic cues to causality discussed earlier. This is particularly true for quasi-experimental analysis, which usually does not rule out all rival explanations. To the extent that policymakers can muster their own rival explanation or that the findings are uncertain, the credibility of the results can be questioned or, worse, the findings can be disregarded entirely. For example, in the absence of sufficient detail on the transition process, it becomes legitimate to ask: How did this small treatment, installed in a "noisy" environment, cause a harmful effect on performance? One obvious answer -- right or wrong -- is that there must be something wrong with the methods used to derive the inference. Indeed, if a plausible model cannot be postulated, this seems to be a reasonable answer.

To evaluate the effect of a particular program which shows no treatment effect, we must have evidence that the treatment (that is, the cause) was indeed present and that the methodology was sensitive enough to detect any effect that it may have produced.

Uses of Evaluations in Transition

A primary use of evaluations in transition is to provide information for policymakers. The worth of an evaluation study is determined by how useful the evaluation data are to the policy maker. In examining uses of evaluations, we need to be aware of the political milieu in which evaluation takes place and how decisions are made.

Patton (1978) notes that evaluations are often used or ignored for political reasons which evaluators cannot disassociate themselves from. Patton et al. (1977) found evaluations were utilized and found to make a difference in unexpected ways. The following factors were identified as contributing to utilization. (1) Evaluators cannot disassociate themselves from the politics surrounding the program. (2) Evaluation designs should be oriented toward future decisions. (3) Key organizational decision makers should be active in defining the purpose, content, and methods of the evaluation study. (4) Utilization does not center around the final report. (5) Continuous evaluation feedback is more useful than the lengthy one-shot report. (6) Evaluations should plan for utilization before data are collected. (7) The evaluator personalizes the evaluation reporting procedures to fit the intended audience.

Hayman et al. (1979) refer to another factor influencing utilization, a "cross-level hypothesis of utilization"; the more proximate the data set to the decision maker, the greater the utility. For example, at the federal level the most useful unit of analysis for the Department of Education is the state education level. Data on students at the classroom level, aggregated into one large data set, have little value for policy at the national level. However, at the district level, data on the school level are more useful than data on individual students or the class as the unit of analysis.

Summary

Research findings can and should play a large role in guiding and directing decision making. The influence of research findings may be felt from creation of policy to implementation of curricular change and service delivery methods. These are certainly appropriate uses of research, yet findings are often utilized without concern for elements that would temper their application.

Potential threats to a study's validity -- both internal and external -- should always be examined before one attempts to apply the results of a given study. Similarly, results from a single study should not be accorded the same weight and consideration as a systematic, well-conducted program of research.

In examining the transition literature, the notion of evidence within quasi-experimental analysis should be extended beyond the prevalent cues to causality established within the classic experimental paradigm. The comments in the preceding section suggest that a comprehensive view of evidence within quasi-experimental analysis requires at least three additional considerations to develop a compelling argument about the causal influence of an intervention. First, the analysis must provide a well-specified and credible rationale that links the causal mechanisms with outcomes; second, it must present evidence to substantiate the claim that the purported causal agent (the intervention) is, itself, a plausible explanation for the observed outcome; and third, it must provide diagnostic assessments and establish the value of the information about purported causal mechanisms and rival explanations. In other words, we must substantiate the basis for our conclusions through additional forms of evidence.

4

Educational Outcomes

Michael L. Connell

The time spent in the educational system has a significant impact upon the life of every individual, an impact that is especially great for students with handicaps. In 1975, P.L. 94-142 served to focus attention upon the academic achievements and quality of educational services available to persons with handicaps. This chapter reviews studies of the educational outcomes of youths with handicaps, includes a summary of the articles reviewed in the earlier editions, and reviews the 24 educational articles added to the database this year.

Categories of Educational Outcomes

In 1986, Harnisch, Chaplin, Fisher, and Tu reviewed 23 articles on educational outcomes and identified five major categories: academic training, vocational training, student ratings of the schools, activities outside the classroom, and issues of behavior. These categories were revised in Volume 2 (Harnisch, Fisher, Kacmarek, & DeStefano, 1987) to provide a more comprehensive and efficient system, and they are retained for this volume. The current categories are: academic training, affective outcomes in the school, vocational education, school-business collaboration, program composition, activities outside the school, student ratings of the schools, postschool adjustment, postsecondary education, career education, and educational-transitional programming.

The category of academic training includes information about grades, coursework completed, test scores and achievement in academic subjects (mathematics, reading comprehension, language arts, civics, and science), IQ scores, Stanford Achievement Test scores, SAT scores, and the impacts of mainstreaming. Affective outcomes deal with students' levels of motivation and self-concept, juvenile delinquency, dropout status, social adjustment, behavior, classroom discipline, and encounters with the law.

Vocational training includes the outcomes of vocational programs within the school environment and the effectiveness of the vocational programs themselves. The related topic of school-business collaboration deals with the nature of contacts between educational, vocational, and bureaucratic personnel; employers and organized labor; and employers' opinions of workers with handicaps. Career education reviews literature covering the composition of career education programs, program effectiveness, and career aspirations of students with handicaps.

Program composition describes the composition of education programs according to demographics: gender, race, ethnicity, socioeconomic status, bilingual status, type of special program, and handicapping condition. Activities that take place outside the school include homework completion, impact of television viewing, and involvement in extracurricular activities. Student ratings of the schools includes studies that measure students' ratings of the type and usefulness of particular programs, the value of education, and the physical layout of the school.

Postschool adjustment is concerned with studies that measure the postschool adjustment of students in terms of income, type of job, education, marital status, living arrangements, and prediction of postschool adjustment. Postsecondary education studies include college preparation programs, predictors of success in college, details of college programs, and the education plans and outcomes of full-time college freshmen with disabilities. The final category of educational/transitional programming covers articles discussing transitional philosophies and programs and services within educational institutions, the community, and other countries.

Review of Previous Volumes' Findings

In the 1987 volume of the Transition Literature Review, several studies note that the academic achievements of youth with handicaps are significantly lower than those of their peers (Curtis & Donlon, 1984; Gottesman, 1979; Hall & Tomblin, 1978; Leone, 1984; Levin, Zigmond, & Birch, 1985; Norman & Zigmond, 1980). In Gregory, Shanahan, and Walberg's (1985) analysis, students with hearing impairments, speech problems, or learning disabilities scored significantly lower in reading, writing, vocabulary, civics, science, and mathematics. The possibility that the use of standardized tests contributed to this finding was identified and expanded in Wolk and Allen (1984) and Elliot, Rock, and Kaplan (1985).

Findings were mixed on the effects of special program placements. There is some evidence to support the idea that some programs provide continuing positive benefits (e.g., Gross, 1984; Levin, Zigmond, & Birch, 1985), but other studies in learning disabilities indicate that the academically related deficits persist over time in populations with learning disabilities (Gottesman, 1979).

In the affective outcome studies, it was noted that sophomores with learning disabilities, speech impairments, or hearing impairments were found to score lower on motivation, adjustment, locus of control, and self-perceptions of attractiveness and popularity (Gregory, Shanahan, & Walberg, 1980, 1984, 1985, 1986, in press). These expectations were supported and echoed by their teachers and parents (Hiebert, Wong, & Hunter, 1982). The persistence of such beliefs was reinforced in Gresham (1982) showing that for mainstreamed students with handicaps, the mainstreaming did not increase social interaction between youth with and without handicaps, did not result in increased social acceptance, and did not lead to their modeling of positive behavior exhibited by the nonhandicapped youth.

In the studies concerned with vocational training it was reported that after graduation, students with handicaps who participated in vocational training were employed at higher rates, experienced greater job satisfaction, and required less supervision or additional training (Boyce & Elzey, 1978). The need for a higher degree of consistency between the on-the-job information collected and reported in vocational assessment and in the IEP's and classroom lesson plans was identified and expanded (Fardig, Algozzine, Schwartz, Hansel, & Westling, 1985; Stodden, Meehan, Hodell, Rissoner, & Cabege, 1986). Trachtman (1986) noted that school-business interactions occur most frequently in classes emphasizing employability skills and that such interactions are initiated most frequently as a result of an individual teacher.

Several studies noted that certain ethnic minorities are overrepresented in special education programs, with black students being overrepresented in mental retardation and specific learning disability programs (Brosnon, 1983; White, Plisko, & Stern, 1985; Wright & Santa Cruz, 1983). A similar pattern was observed for limited-English proficient students, who are often placed in classes for those with learning disabilities or speech impairments classes (Bernal, 1983). Bernal recommends separating limited-English proficient and special education programs and recruiting minority and bilingual professionals.

In examining students' ratings of schools, the task of knowing how to study was identified by Vetter-Zemitzsch (1983) as the greatest difficulty encountered in high school by students both with and without learning disabilities. Students with learning disabilities felt they were unprepared to cope with everyday living and desired greater training in job specific skills and check writing (Messerer & Meyers, 1983).

In the postsecondary educational adjustment research it was suggested that researchers consider that many individuals with handicaps are capable of completing postsecondary education (Monohan, Giddan, & Emener, 1978). In particular, it was suggested that studies be designed to focus on the identification of the assistance needed. Brown, Weed, and Evans (1987), who investigated perceptions held by students with and without handicaps, were unable to find a consistent relationship between the skills they used most frequently and the skills perceived as important by the student. They argue for considering students' perceptions in evaluating the significance of educational programs.

Sample Description

Handicapping Condition. The handicapping conditions discussed in the articles dealing with education outcomes are illustrated in Table 4.1. Because many studies include more than one handicapping condition in their samples, the frequencies of all handicapping conditions exceeds the actual number of studies. In addition, a number of the documents are reviews of numerous studies or are conceptual in nature and cover practically all handicapping conditions in one document.

Table 4.1 Distribution of Educational Outcome Studies By Handicapping Conditions

HANDICAPPING CONDITION	NUMBER INCLUDED Volumes 1 & 2	NUMBER ADDED Volume 3
Learning Disabilities	35	16
Speech Impairments	17	1
Mental Retardation		
Mild	17	4
Moderate	13	2
Severe/Profound	11	2
Serious Emotional Disturbance	14	4
Hearing Impairment/ Deafness	21	7
Orthopedic Handicaps	15	2
Other Health Impairments	10	2
Visual Handicaps	15	3
Multiple Handicaps	11	2
Deaf-Blindness	9	1
Educationally at Risk	9	0

The most common handicapping condition discussed in the educational outcome literature continues to be learning disabilities. Of the reports added this year, 63% include subjects with learning disabilities, compared to 63% reports for the first two volumes. A number of other handicapping conditions were well represented in the literature, including hearing impairments (29%, compared to 38% for the first two volumes) and severe/profound mental retardation (54%, compared to 20% for the first two volumes).

Handicapping conditions reported in 10% to 20% of the new documents include mild mental retardation, serious emotional disturbance, hearing impairments, and visual handicaps. Each of the other handicapping conditions (speech impairments, moderate mental retardation, orthopedic handicaps, deaf-blindness, other health impairments, multiple handicaps, and educationally at risk) were each included in less than 10% of the added documents.

Demographics. Table 4.2 provides the number of subjects and a description of the samples in the studies reviewed. Samples from the added articles vary in size from 8 to 7,557. The largest sample was in a study of students with hearing impairments from all regions of the United States. Another study using a large sample (1,596 subjects) concerned an effort to develop better empirical formulae for use in identifying learning disabilities. Subjects ranged in age from junior high school to adult, with the majority in the secondary to postsecondary group.

A number of other articles constituted reviews of the literature, reports and descriptions of programs, or position papers of theoretical importance to educational outcomes, and thus do not deal directly with subjects.

Table 4.2. Sample Size and Descriptions for Educational Outcomes

REC#	SIZE	SAMPLE DESCRIPTION
182	1,596	Sample was made up of data collection sheets filled in by workers from school districts around the state of Michigan.
190	60	The sample consisted of college students, 30 of whom had severe disabilities and 30 who were not severely disabled.
200	*	Child Service Demonstration Center (CSDC) established by title V1-6 of P.L. 91-230 to identify, diagnose, and serve students with learning disabilities.
212	72	Twenty students with learning disabilities and 52 without enrolled in three sections of a writing class for two semesters taught by faculty with no training in dealing with LD students.
216	80	Subjects in a selective college responded to a psycho/educational questionnaire, interviews, and submitted samples of their academic work. Fifty-six subjects had learning disabilities and 24 were in a control group.
217	23	Subjects take part in a 5-week, non-credit, post-high school/precollege summer program.
229	*	Several studies were examined.
230	7,557	Students with hearing impairments from all regions of the United States.
240	*	A plan for transition services is explained.
245	50	Commissioners of Education in all 50 states and the District of Columbia. Only Mississippi Commissioner declined to participate.
246	738	Using High School and Beyond data, Hispanic students with learning disabilities were compared to Anglo students with and without learning disabilities.

* - Sample size was not identified

Table 4.2 (Cont'd) Sample Sizes and Descriptions For Educational Outcome Studies

REC#	SIZE	SAMPLE DESCRIPTION
250	106	57 students without handicaps and 55 with mild to moderate mental retardation.
260	105	Students classified as legally blind and registered with the Canadian National Institute for the Blind.
271	*	Several samples were studied.
273	21	College students who participated in a college writing project.
274	37	Students from the National Technical Institute for the Deaf who were enrolled in programs at the Rochester Institute of Technology.
278	*	Several studies were examined.
280	*	This study examines previously published evaluations of technological devices.
282	20	Students with hearing impairments from 5 junior and 4 senior high schools.
285	*	Strategies for developing college programs for students with learning disabilities are discussed.
288	12	University of Akron students with hearing impairments.
290	22	College students with learning disabilities enrolled in the program.
293	8	5 students who had math scores at grade level and 3 student who were operating below grade level.
294	10	Students with learning disabilities who participated in the first two years of the program.

Location and Level of Studies. The majority of the newly added studies used local samples (10 documents) or national samples (4 documents), or were meta-analyses (4 documents). The location and level of each of the educational outcome studies is presented in Table 4.3.

Table 4.3 Level and Location of Studies With Educational Outcomes

Record #	Level (Loc)	Record #	Level(Loc)
182	ST (MI)	260	CANADA
190	MS	271	RS
200	NA	273	LO (MN)
212	LO (MN)	274	LO (NY)
216	LO (MA)	278	MA
217	LO (WI)	280	RS
229	RS	282	LO (TX)
230	NA	285	PM
240	PM	288	LO (OH)
245	NA	290	RS
246	NA	293	LO (OH)
250	LO (NY)	294	LO (OH)

KEY:
LO - Local Study ST - State Study NA - National Study
MS - Multiple State Study MA - Meta-Analysis
RS - Research Synthesis PM - Program Model (__) State

Review of Current Articles on Educational Outcomes

A theme reflected in many of the educational articles added to the database this year is the use of modern technology, such as computer-based word processing and tutorial systems, to meet the needs of individuals with handicaps. This technology can provide many potential tools for use in meeting educational needs, but without careful and consistent planning, the great potential of these aids will not be fully realized.

In examining potential uses of this technology, Gardner and Campbell (1987) suggest that specific concerns must be addressed to realize the modern technology's potential for enhancing the opportunities for integration, independence, and personal choice for individuals with severe disabilities. In particular, they consider that the obstacles to the use of the devices themselves must be investigated. Strategies for the selection, design, and use of devices must be established, and an integrated approach must be taken toward incorporating technology into the planning processes.

Two studies using microcomputers offer findings for the college student with learning disabilities. Collins, Engen-Wedin, Margolis, and Price (1987) studied a writing course using microcomputer word processing. In the course, the students with learning disabilities persisted to task completion at the same rate, demonstrated similar attitudes toward writing, and achieved grades comparable to students without learning disabilities.

Dunham (1986) also used word processors to aid students with learning disabilities in mastering writing skills. It was found that both the students with and without learning disabilities demonstrated similar patterns of grade achievement and task completion rates. Messerly (1986) reported improvements in the mathematics skills of students with hearing impairments as a result of using a series of computer-assisted lessons.

These positive findings are tempered somewhat by Goldberg (1987), who reports that although most colleges recognize that there are students with learning disabilities on campus, few alter their curricula or provide specialized services for those students with learning disabilities. Thus, those students are further disadvantaged by not having available to them the services and curricula which would serve them best in fulfilling their potentials.

Many students with handicaps find themselves overwhelmed by the transition from a structured and controlled environment in high school to the less well-structured setting of college. Dalke and Schmitt (1987) describe a successful five-week, non-credit, post-high school/pre-college summer program designed to facilitate the ability of students to cope with the demands of college. The program emphasizes affective support, diagnostic evaluation, academic reinforcement and instruction, strategy training, awareness of support services available, and general campus awareness. Wright State University's programs for students with learning disabilities offer support services in academics, special tutoring, and student counseling (Bierley & Manley, 1980).

The presence of a handicap may have a significant role in a student's success in college. Martin and Bowman (1985) report that the severity of the handicapping condition accounted for 30% of the variance in their study predicting college GPA's.

Students with hearing impairments may also need additional training before beginning their college careers. Flexer, Wray, and Black (1986) note that college students with congenital, moderate, hearing loss have a cluster of needs that often go unrecognized and unserved. In testing these students it was found that they generally lack knowledge of hearing loss, the auditory system, assistive listening devices, conversational strategies, and college services to which they are entitled.

It is important, however, not to rely solely upon group-oriented programs to meet the transition needs of students with disabilities. Cobb and Hasazi (1987) point out the importance of providing more thorough and individualized transition services than are currently offered, particularly for high school students with mild disabilities. To aid in this process Vogel (1982) urges closer interrelation and communications between the special services staff and the regular academic staff to aid in student success.

For the college-bound, the admissions tests may pose additional difficulties. Bennett and Ragosta (1985) examined the technical adequacy of college admissions tests for students with handicaps. Of all handicapping condition groups compared to the general population, those students with learning disabilities and hearing impairments performed the most poorly. A closer look at standardized test performances by students with disabilities was made by Allen (1986). Using data from the 1974 and 1983 norming of the 6th and 7th edition of the Stanford Achievement Test, he notes that although improvement has been made, students with hearing impairments still lag behind their normal-hearing counterparts in reading and mathematics, with the observed deficit being more profound in reading than in mathematics.

To aid the transition of vocational students, Okolo and Silington (1986) recommended that six vocational skills be emphasized: occupational awareness, career/vocational assessment, job related academic skills, interpersonal skills, availability of support services, and post-high school placement and follow-up.

The nature of classroom participation was addressed by Raimondo and Maxwell (1987). They studied communication modes used in junior and senior high school classrooms by students with hearing impairments, their teachers, and their normal-hearing peers. It was found that although the students with hearing impairments were predominantly speech-oriented, they demonstrated only minimal self-initiated interaction with normal hearing teachers and peers, and communicated more often with hearing impaired peers when they were available. In examining classroom participation of mainstreamed college students with hearing impairments, Saur, Popp-Stone, and Hurley-Lawrence (1987) found that although the degree of hearing loss is not related to the degree of student participation, as a group students with hearing loss participate significantly less frequently than their peers without handicaps, which suggests that the observed communication patterns result from the presence of the handicap, not its severity.

The future educational plans of 105 youth with visual impairments were studied by Bush-LaFrance (1988), who noted that the youth in her sample had generally lower occupational, but not educational, expectations than their sighted counterparts. A negative relationship was found between the students' degree of vision and their educational expectations. With respect to educational expectations, the students' self-concept of academic ability, socioeconomic status, friends' educational plans, and degree of vision accounted for 38% of the variance. Self-concept of academic ability, socioeconomic status, and degree of vision accounted for 33% of the variance in occupational expectations.

Compliance with federal regulations was addressed in a nationwide survey of the Commissioners of Education in the 50 states and the District of Columbia by Salend and Fradd (1986). They report that few states have established the procedures and guidelines mandated for delivering educational services to the limited English proficient students.

Cardosa and Rueda (1986) used the High School and Beyond data to compare the educational and occupational outcomes of Hispanic students with learning disabilities with Anglo students with and without learning disabilities. The results indicated that there were significant differences between the groups of subjects with and without learning disabilities. In general, there were no differences between the Anglo and Hispanic students with learning disabilities.

In their analysis of the Child Service Demonstration Centers' compliance with the federal definition of learning disabilities, Mann, Davis, Metz, and Wolford (1983) noted that compliance will be difficult to obtain until a clearer definition is provided. The difficulty of developing such a definition was shown by Friedrich, Fuller, and Davis (1984), who report that even the best empirically derived definition possessed only moderate discriminant ability.

In a meta-analysis of research dealing with the effectiveness of using students with handicaps as tutors, Cook, Scruggs, Mastropieri and Casto (1986) reported three main findings. First, tutoring programs were generally effective. Second, tutees generally gained more than did the tutors. Finally, tutor and tutee gains on self-concept and socioeconomic status were small, whereas gains on attitude measures were longer.

Future Research Directions

Research into the uses of technology in academic training and vocational education could provide important information about available options and difficulties that can be expected. Currently technology is utilized in a case-specific fashion without benefit of global planning or coordination. Closer investigation of various examples of the potential uses of technology is needed (e.g., word processing, communications, computer-assisted instruction; prosthetic uses of technology).

Further research needs to be conducted into the selection procedures of special educational programs which contain a disproportionate number of minority and limited-English proficient students. As noted in Volume 2, these students are already at risk in the present academic system and should not be labeled as having learning disabilities or being educationally at risk without effort from the educational system to accommodate their cultural and language experiences and backgrounds. Until students are accurately placed, it will not be possible to meet their educational needs or use special education resources efficiently.

Additional research into successful career education and postsecondary programs should be undertaken. By identifying the program components leading to success it becomes more likely that these successes may be duplicated elsewhere. Investigation into the organization structures and policies of successful programs could be quite helpful in improving programs in other areas.

Researchers should continue to investigate interactions between specific disabilities and the educational system. A balanced focus upon the strengths and weaknesses of students with handicaps should be provided. A simple listing of failures and difficulties is of little benefit in improving the education of these students.

Employment Outcomes

Lizanne DeStefano

Employment is the outcome most frequently associated with the transition process. In her paper announcing the federal priority on transition, Will defined transition as "an outcome oriented process encompassing a broad array of services and experiences that lead to employment" (1984, p. 3). Reflecting this priority, Dowling and Hartwell (1988) estimate that over 50% of the model demonstration programs funded under the federal transition initiative have as a goal the placement of students into competitive or supported employment.

Employment is a critical outcome of transition for several reasons. First, the opportunity to earn a competitive wage and to spend it as one chooses enhances an individual's independence and decision-making capacity. Financial independence, whether from parents or from the social welfare system, increases the options from which an individual may choose in terms of where to live, how to spend leisure time, what to own, and how to plan for his or her future.

Second, employment carries the idea of integration and normalization from the individual's public school experience into adult life. Ideas that form the keystone of special education (e.g., least restrictive environment, community-based instruction, and mainstreaming) have little utility if students leave school for a life of segregation and low productivity. Full integration into the community in adulthood involves not only work time, but also the after-work and weekend hours when residential and leisure activities are of paramount importance. Just as work plays an important role in the lives of most nonhandicapped individuals, integrated work experiences maximize the opportunities for individuals with handicaps to have interactions and to develop friendships with their nonhandicapped peers, to gain proficiency at performing a valued task, to engage in productive activity leading to economic self-sufficiency, and to contribute to the well-being of a company and to society at large as an employee and taxpayer.

Finally, the widespread acceptance as members of the regular workforce can do much to change society's perception of persons with handicaps from those who must be cared for to valued, contributing members of society. Employers across the United States are welcoming this influx of entry level workers from this previously untapped source (DeStefano, 1988).

Summary of Previous Volumes' Findings

The employment outcome chapters in the first two volumes of the Transition Literature Review, (Harnisch, Chaplin, Fisher, & Tu, 1986; Harnisch, Fisher, Kacmarek, & DeStefano, 1987) discussed the inherent definitional problems in such areas as employment status and income. Trends in these studies indicate that a large percentage of people with handicaps are not working in integrated settings. Those who are working are most often working less than full time in entry-level positions at or below minimum wage with few benefits.

However, some evidence suggested that this situation is changing. Participation in high school vocational classes and holding a part-time job in high school were found to be related positively to wages and employment status. It was also found that contextual factors such as geographic location and gender were related to the employment status of persons with handicaps.

Volume 2 of the Transition Literature Review closed by stating the need for research in several areas: factors related to job success, effective technology or program designs for placing and maintaining people in job sites; and policy analysis. In our search for articles to be included in Volume 3, we were careful to use descriptors that would locate articles in these areas. This chapter focuses on those articles.

The Current Database

Number of Articles Reviewed. During the past three years 136 articles dealing with employment outcomes associated with transition have been reviewed and entered into the literature database. Of these, 90 have been reviewed in Volumes One and Two of the Transition Literature Review. The remaining 45 articles added this year serve as the basis of this chapter.

In our search of the literature, the variables used to define employment outcomes were: employment status, wages, job placement, benefits, job type, job tenure, job satisfaction, supported employment, competitive employment, employment services, income, employer acceptance, training, and job success.

Sample. These articles reviewed in this chapter pertain to a number of handicapping conditions as illustrated in Table 5.1. As in past years, persons with mental retardation (52) were most often the focus of the articles. Other handicapping conditions represented in the samples included learning disabilities (12), multiple handicaps (12), emotional disturbance (12), hearing impairments and deafness (11), orthopedic handicaps (10), visual handicaps (10), health impairments (7), and speech impairments (8). A smaller number of studies were reviewed that dealt with students who were deaf-blind (4) or educationally at risk (5). Several articles dealt with more than one population.

Demographics. Table 5.2 provides information on the sample sizes and description for each of the 45 articles reviewed this year. Sample sizes ranged from 2 to 284,974 subjects, with a median size of 53. Employees who are clients of adult service providers constituted the most common subject type across all studies, followed by public high school students, public school graduates and school leavers, sheltered workshop clients, and educational and rehabilitation personnel.

Table 5.1. Distribution of Employment Outcome Studies by Handicapping Condition

HANDICAPPING CONDITION	NUMBER INCLUDED LAST YEAR	NUMBER ADDED THIS YEAR
Learning Disabilities	35	12
Speech Impairment	18	8
Mental Retardation:		
Mild	48	17
Moderate	45	19
Severe/Profound	41	16
Serious Emotional Disturbance	28	12
Hearing Impairments	27	11
Orthopedic Handicaps	33	10
Other Health Impairments	20	7
Visual Handicaps	22	10
Multiple Handicaps	22	12
Deaf-Blindness	12	4
Educationally at Risk	10	5

Location and Level of Studies. Of the 45 employment outcome studies reviewed for this volume, six were conducted at the national level, seven at the state level, and 24 at the local level. Four articles synthesized information from several levels and there were descriptions of a number of training programs. The levels and locations at which the studies were conducted are given in Table 5.3.

Table 5.2. Sample Sizes and Descriptions for Studies With Employment Outcomes

REC#	SIZE	SAMPLE DESCRIPTION
177	49	Agency representatives from 50 states were contacted; in Oklahoma no single person was available to discuss statewide programs.
178	*	This article was a program model.
181	103	The sample consisted of 80 nonhandicapped and 23 individuals classified as mild to severely mentally retarded.
183	50	Students with sensorineural deafness from the Texas State School for the Deaf.
186	9	This sample consisted of students identified as moderately handicapped and severely handicapped.
188	37	Agencies were solicited to respond in the areas of : statement of policy, completion of R-300 data, staff development and direct client services.
191	125	The sample consisted of: 85 Corps members enrolled in the center for 90 days and 40 former Corps members who had been enrolled for less than 90 days or who had dropped out.
192	50	Employment related skills of 25 employed individuals were compared to 25 unemployed individuals.
194	*	Several studies were examined.
196	3	Three unemployed adults, receiving compensation for work-related disabilities participated in the study.
197	20	University agriculture students.
199	*	Comparison between 59,383 blacks and 225,591 whites.
205	*	Young adults with varying disabilities.
207	2	Two mentally retarded students, both females, one was classified as moderately mentally retarded and the other in the severe range.

* - Sample sizes not identified

Table 5.2 Cont'd. Sample Sizes and Descriptions for Studies with Employment Outcomes

REC#	SIZE	SAMPLE DESCRIPTION
214	86	Subjects were 31 females and 55 males certified as having learning disabilities. Their ages ranged from 18 to 59 years, and their mean IQ was 96.8.
215	326	The sample comprised 326 employees responding to a survey.
221	26	Twelve male and 14 female persons with mental retardation were the subjects. Their average IQ was 62, and mean age 33 years.
223	5	3 male and 2 female students with handicaps ranging from mild to severe.
225	17	12 males and 5 females with mental retardation. Mean IQ = 57.4.
227	1,438	Individuals with mild to moderate mental retardation.
232	30	Employees with handicaps of 3 sheltered and 6 nonsheltered work environments were examined.
233	21	Subjects ranged in age from 18 to 63. Average IQ = 31. Some individuals had severe limitations on speech. None had independent travel skills prior to placement.
235	26	This group was divided into three categories, those who received: (a) supported competitive employment services, (b) only job placement services, or (c) no known services.
237	*	Several studies were examined.
238	5	Employees of a sheltered workshop who were ambulatory and had satisfactory expressive language.
239	640	143 administrators, 275 teachers, and 222 parents of high school students with handicaps.
241	80	40 employers and their 40 employees with handicaps.
243	1,797	Includes special education students from 13 school districts who graduated or aged out in 1984, 1985, and 1986. Students without handicaps were also included.

Table 5.2 Cont'd. Sample Sizes and Descriptions for Studies with Employment Outcomes

REC#	SIZE	SAMPLE DESCRIPTION
251	63	Study 1 examined 30 individuals with developmental disabilities. Study 2 examined 17 individuals with developmental disabilities and 16 cohorts without handicaps.
252	*	Several studies were examined.
253	1,292	Former students from special education classes in Washington state.
25[illegible]	1,292	Former students with varied disabilities from Washington state public schools.
256	1,117	Individuals with hearing impairments who graduated from the Rochester Institute of Technology.
258	*	A case study is included.
259	4	3 women and 1 man diagnosed as having mental retardation.
261	71	High school and college students with severe physical disabilities placed in employment over a five-year time span.
262	*	Several studies were examined.
263	5	Clients with mental retardation. IQ range of 36-63.
264	225	Alumni of the National Technical Institute for the Deaf.
265	*	Numerous samples were examined.
266	252	Individuals who had participated in the program and who responded to a survey 22 months following enrollment in the program.
267	113	The respondents included: 44 state education administrators, 34 state vocational administrators, and 35 administrators of residential programs for adults with severe disabilities.
268	52	The subjects were 32 students with specific learning disabilities from three southeast Maine school districts, and 32 control group students from two other schools contacted in the follow-up.
269	*	Several studies were examined.
270	6	Individuals with severe mental retardation.

Table 5.3. Level and Location of Studies on Employment Outcomes

REC#	LEV(LOC)	REC#	LEV(LOC)
177	NA	237	RS
178	LO (NJ)	238	LO (UT)
181	LO (IL)	239	ST (OR)
183	ST (TX)	241	LO (FL)
186	LO (OR)	243	ST (WA)
188	NA	251	LO (UT)
191	LO (AZ)	252	RS
192	LO (KS)	253	ST (WA)
194	RS	254	ST (WA)
196	LO (KS)	256	NA
197	LO (HI)	258	LO (OH)
199	NA	259	LO (MO)
205	PM	261	LO (NY)
207	LO (IA)	262	LO (NY)
214	LO (AZ)	263	LO (PA)
215	MS	264	LO (NY)
221	LO (CA)	265	RS
223	LO (CA)	266	MS
225	LO (OH)	267	NA
227	NA	268	LO (ME)
232	LO (WI)	269	MA
233	ST (VA)	270	LO (IN)
235	ST (VA)		

KEY:
LO - Local Study ST - State Study NA - National Study
MS - Multiple State Study MA - Meta-Analysis
RS - Research Synthesis PM - Program Model (__) - State

Synthesis of Literature on Employment Outcomes

Studies on Effective Employment Programs. A number of studies provide empirical evidence of the effectiveness of programs providing employment services to persons with handicaps. For example, when faced with the problem of 175% staff turnover each year, a McDonald's restaurant employed 17 individuals with mild and moderate mental retardation. Brickey and Campbell (1981) conducted a one-year follow-up of the program and found that 10 of the original 17 workers were still employed (41% turnover). Three of the seven who left their jobs did so to take better jobs. In a two-year follow-up at the same employment site, no further turnover was reported. Schalock, Wolzen, Ross, Elliot, Werbel, and Peterson (1986) followed up 108 graduates with moderate and severe handicaps from rural schools employing a community-based job exploration and training model. They found that 61% of these individuals were working competitively and 22% were living independently. Those students whose families were moderately to highly involved were more successful than those whose parents were uninvolved in the transition process.

Several studies reported upon the benefits of employment training programs in transition. Clarke, Greenwood, Abramowitz, and Bellamy (1980) reported on a program that combined natural environment instruction with CETA services to provide fully paid community-based work experience for high school students with moderate and severe handicaps. The nine students enrolled in the program earned an average of $950 for the summer. A positive change in parents' attitudes toward their child's independence and ability to work was also judged to be a positive outcome of the program.

Gaylord-Ross, Forte, and Gaylord-Ross (1986) described a community-based vocational training program for students with severe handicaps who were taught technological work tasks in a research laboratory setting. Findings from the study showed that these individuals were able to acquire the appropriate work behaviors and technical job skills, and that these skills did generalize into other work settings. In the highly empirical STETS evaluation, Kerachsky and Thornton (1987) demonstrated that with assistance young adults with mental retardation can perform competitively in real employment settings and that employment training programs such as STETS helped such individuals achieve their maximum employment potential.

Hunter and Zuger (1979) evaluated the Placement and Job Development summer program at the Institute of Rehabilitation Medicine in New York. The program was designed to provide college students with severe disabilities with paid summer work experiences. Positive results associated with the program were: marketable skill enhancement, improved work habits, and increased employer awareness and acceptance of persons with disabilities. In a more recent study, Howard and Campisi-Johns (1986) reported on a program established by the California Community Colleges Chancellor's Office: Disabled Students Programs and Services to help students with disabilities attending community colleges acquire marketable skills. In a survey of program graduates, 51% reported that they were employed and 41% reported enrollment in an advanced education program. Each of the studies presented above provided empirical evidence of the effectiveness of employment training in preparing individuals with handicaps for work and in maintaining them in employment.

A study by Schmitt, Growich, and Klein (in press) described the essential elements in a program to assist in the transition from school to employment. The six steps are: (1) development of an individualized transition plan; (2) identification of learning strategies that work with a particular student; (3) vocational exploration and career education; (4) employability skills training; (5) supported job search-placement-follow-up; and (6) parent/agency cooperation and involvement. These items were frequently cited as salient components of program effectiveness in studies reviewed for this volume and seem to characterize the development of many transition programs.

Factors Associated with Successful Transition. Identifying individual, program, or contextual factors associated with successful employment was the topic of 11 articles reviewed for this volume. Several of these studies identified factors that were external to the individual. Arriving at findings similar to those of Schalock et al. (1986), Brickey, Campbell, and Browning (1985) conducted personal interviews and reviewed agency records to examine the vocational histories of 53 persons with handicaps. They found that those persons whose parents wanted them to work and could influence them to do so had greater success finding and maintaining employment than persons without positive parental influence. Gallegos and Kahn (1986) found that participation in a structured activity such as work or school prior to entry was the strongest predictor of success in a Job Corps program. Structure was also found to be important in a study by Brickey, Browning, and Campbell (1982) in studying the job histories of 73 sheltered workshop employees placed in competitive employment over a 30-month period. Sixty percent of those persons placed were still on the job 30 months later. In this study, job structure appeared to be more important to job success than employer demographics.

In a study for the National Technical Institute for the Deaf, Welsh, Walter, and Riley (1986) found that level of education exerted the most significant influence on wages. They also found that deaf persons' earnings were approximately 93% of their hearing peers of the same educational level. In another study with a deaf population, Saur, Coggiola, Long, and Simonson (1986) found that degree of hearing loss has no relation to placement success and employment status.

In other studies individual characteristics were found to be major predictors of employment success. Wehman, Hill, Wood, and Parent (1987) described the competitive employment experience of 21 persons with severe mental retardation (IQ < 40) who had earned, collectively, a total of $230,000 in subsidized wages from 1978-1986. Slow work rates and lack of appropriate social skills were cited as the major causes of problems on the job for this group. Krauss and MacEachron (1982) came to similar conclusions as they listed the best predictors of placement success as: appropriate work behavior, adequate job skills, and the level to which work was a reinforcer to the employees. In a study involving adults with learning disabilities, Faas (1987) found that verbal IQ scores and a persistent personality type were the greatest contributors to employment success for this group. Job finding and job retention skills were found to be two factors that differentiated between employed and unemployed adults in a direct observational study by Mathews, Whang, & Fawcett (1981).

In the studies reviewed, appropriate social skills, adequate job skills, and parental and family support were the factors most frequently associated with job success. Some researchers chose to focus on these areas individually in their study of employment outcomes. These studies are reviewed below.

Social Skills and Social Skills Training. The nature and quality of social interactions on the job and strategies for influencing those interactions were the topics of three studies reviewed. Two of these compared the nature and frequency of social interaction in sheltered and nonsheltered employment settings. Looking at work-related interactions, Nisbet and Vincent (1986) examined instructional interactions and work-related behavior of 15 workers in nonsheltered vocational environments and 15 workers in sheltered environments. They found that workers in nonsheltered environments engaged in significantly more instructional interactions and fewer occurrences of inappropriate behavior than those in sheltered settings.

Non-task-related social interactions of workers with developmental disabilities during break and lunchtime were the focus of the study by Lignugaris, Salzberg, Stowitschek, and McConaughy (1986). They found that in both settings, workers with handicaps were active initiators and participants in paired and group interactions.

Given the importance of social skills in job success and integration, training social skills would seem to be an important element in preparing students for work. Agran, Salzberg, and Stowitschek (1987) assessed the effects of a training package in increasing the percentages of initiations with a supervisor when an employee ran out of materials or needed assistance. Their results suggest the feasibility of a social skills training package using self-instruction to help persons with moderate and severe handicaps to acquire, maintain, and generalize behavior in a social setting.

Training Work-Related Behaviors. Together with appropriate social skills, adequate job skills were cited as good predictors of employment success. Six studies dealt with technology for training job-specific skills. Four of these studies involved the use of applied behavioral analysis. Ackerman and Schapiro (1984) used self-monitoring techniques to increase the productivity of five adults with mental retardation in an employment setting. The higher productivity level was maintained via the use of self-monitoring alone. However, little generalization was seen until self-monitoring was introduced in the generalization phase. Hughes and Peterson (in press) used self-instruction to increase on-task behavior in both training and work sites.

The effectiveness of a behaviorally based book designed to teach the skills needed to locate and obtain employment for persons with physical handicaps was evaluated by Mathews (1984). Employment interview target behaviors were found to occur with much greater frequency after self-training than before the program was implemented. Wacker, Berg, Visser, Egan, Berrie, Ehler, and Short (1986) found that behavioral training at a community job site was successful not only in training job specific skills, but also increased independent demonstration of incidental behaviors and heightened the ratio of appropriate versus inappropriate behavior.

Two studies used peers or co-workers to promote independence and increase productivity in supported employment settings. Rusch and Hughes (in press) outline areas in which co-workers can become active participants in promoting independent performance on the job: (a) evaluating employee independence; (b) teaching employee adaptability; (c) facilitating assistance by co-workers; and (d) transferring control of employee independence to work-related stimuli. In a study with six students with mental retardation, Knapczyk, Johnson, and McDermott (1983) found that close supervision by a supervisor or peer produced and increased on-task behavior, with peers producing the greatest increase.

Employer Attitudes. Foss and Peterson (1981) found that employer attitudes toward workers with handicaps was one of the areas identified most frequently as relevant to job tenure for adults with mental retardation. Minskoff, Sautter, Hoffman, and Hawks (1987) surveyed 326 employers from six states to assess their attitudes toward the employment of workers with learning disabilities. Despite generally positive attitudes about making special allowances for workers with handicaps, as long as such allowances did not involve reduced work load or involvement in the worker's personal life, one-half of the employers said that they would not hire a worker with a learning disability.

Evaluating employers' perceptions of workers with mental retardation who were receiving supported competitive employment services, job placement services, or no known services, Shafer, Hill, Seyfarth, and Wehman (1987) found that employers were generally satisfied with the performance of these workers, and that they were most satisfied with the performance of those who were receiving supported competitive employment services. These findings indicate the need for employer education and marketing programs to "sell" the abilities of persons with handicaps, and for research to identify employer concerns and needs concerning hiring workers with handicaps.

Additional Considerations. The findings of the studies in this review portray positively the advances in research and technology involving employment outcomes. Identifying the individual, environmental, and experiential factors associated with successful employment has important implication for the design and implementation of employment programs.

The application of behavior analytic methods in integrated work settings has been demonstrated successfully. Evaluations of employment programs for workers with handicaps have provided evidence of low job turnover, substantial earning potential, and high employer regard.

Despite these considerable advances, there are still some areas of concern. Three articles mentioned prevailing or rising inequalities in the employment of persons with handicaps.

On the Down Side. Atkins and Wright (1980) wrote about the unequal treatment of blacks in all dimensions of the public vocational rehabilitation process. A large percentage of black applicants were not accepted for vocational services, and a large percentage of black cases were closed without the client being rehabilitated. Blacks were provided far less training and education, even though their needs were greater because of lower pre-service education levels.

Reporting on another under-served population, that of persons with specific learning disabilities, a national survey of state directors of vocational rehabilitation, Miller, Mulkey, and Kopp

(1984) found that a relatively small number of persons were currently being served in the rehabilitation system. It should be noted that the agencies reported that they were making notable preparations for the provision of high quality services to this population. As the employment initiative grows, equal access for all handicapping conditions must be safeguarded.

Another area of concern is the financial status of workers with handicaps. Increased financial independence is often assumed to be a benefit of a full-time employment for individuals with handicaps. Schloss, Wolf, and Schloss (1987) used a balance sheet approach to examine the financial implications of part- and full-time employment. It was found that annual disposable income was comparable for individuals working part-time when compared to full-time. In both cases, the amount of disposable income is no more than $3,000 over that of an unemployed person. These findings highlight the absence of financial incentives for full-time employment. Although being employed and productive is important in and of itself when evaluating the effectiveness of an employment program, the overall quality of life must be evaluated. Federal policy has eliminated many of the policy disincentives surrounding employment of workers with handicaps, but until these policy changes are universally implemented, individual case review is still warranted.

As persons with handicaps become a more viable and substantial part of the work force, care must be taken to protect their rights and to prevent exploitation of a group who may not be effective advocates for themselves. One area of concern involves workers' benefits and access to horizontal and vertical enhancement options.

Martin, Rusch, Tines, Brulle, and White (1985) compared the work attendance of food service workers with handicaps and those without disabilities. No differences were found between workers with mental retardation and their nonhandicapped peers across the variables of unexcused absences, excused absences, and sick leave. However, nonhandicapped employees were found to work a greater amount of overtime and took more vacation than their co-workers with handicaps. Including variables such as these in a research design illustrates more fully the status of the worker with handicaps on the job.

Conclusion

Employment continues to be a key outcome associated with transition programs for people with handicaps. Several effective employment programs have been presented in the literature. Factors such as parental involvement, job structure, appropriate social skills, and adequate job skills have been identified with successful employment. Awareness of these factors and the use of behavior analytic technology have had an impact on the design and implementation of employment programs. As persons with handicaps become more prevalent in the work force, their rights of equal opportunity and equal access should be assured.

Independent Living

Adrian T. Fisher

Conceptualizations of independent living in the literature are varied and often quite contradictory (Harnisch, Chaplin, Fisher, & Tu, 1986). The term itself provides some direction to the understanding of the concept, but does not fully identify its scope or meaning.

In the previous reviews of independent living (Harnisch et al., 1986; Harnisch, Fisher, Kacmarek, & DeStefano, 1987), we have presented independent living as the active use of a set of skills and abilities that enable people with handicaps to take control over their lives. These seven areas are: (1) self-advocacy and maintenance skills, (2) living arrangements, (3) education, employment, and training, (4) mobility and transportation, (5) generic community services, (6) community interaction, and (7) recreation and leisure. It is a multidimensional concept that starts with the freeing of persons from institutional and other restrictive living settings, but goes far beyond.

In conceptualizing independent living, we have taken the stance that it is a process as much as an outcome. Skills that lead to autonomy and self-determination can be taught to people with handicaps. The conceptualization is focused on breaking the dependencies on institutional living and those in the helping professions whose actions promote further dependence. Thus, through the training and use of independent living skills, the people can be empowered and able to take charge of their lives.

Stoddard (1978) expresses the notion of independent living thus:

> When those active in the disabled movement use the term "independent living" they are referring to their ability to participate in society--to work, have a home, raise a family, and share the joys and responsibilities of community life. "Independent living" means freedom from isolation or from institution; it means the ability to choose where to live and how; it means the person's ability to carry out activities of daily living that nondisabled people often take for granted. (1978, p. 2)

This description offers many ideas about independence, and the areas of life in which it must be considered. It demonstrates the multidimensional nature of life in the community and the need for a person with a handicap to have many skills that are to be used in coping with the demands of community membership.

Literature on Independent Living

Categories of Outcomes

The definition of independent living used for this review of literature provides a simple way to categorize the studies and reports into seven identified domains. The distribution of studies across these domains is shown in Table 6.1. The outcome variable most commonly studied is again that of self-advocacy and maintenance skills, followed by those studies that focus on the social interactions between those with handicaps and their nonhandicapped peers. This large increase in social interaction studies should provide a lot of benefit in the understanding of the processes related to the acceptance of persons with handicaps by members of the broader society.

Table 6.1. Independent Living Outcome Variables Represented in the Literature

VARIABLE	NUMBER OF STUDIES
Self-Advocacy and Maintenance Skills	25
Living Arrangements	8
Generic Services	2
Mobility and Transportation	3
Employment and Training	9
Leisure and Recreation	5
Community Interaction	20

Again, a number of areas are not well represented in the studies reviewed for this volume of the Transition Literature Review. The use of generic community services and studies of mobility and transportation issues have few entries. Similarly, leisure and recreation studies are not very common.

A number of variables were focused on in articles but are not directly specified in our definition of independent living. The most important of these are: (a) quality of life, (b) program descriptions, and (c) satisfaction with services provided by various agencies. The latter two represent factors that are important in the promotion of independent living, and the first is an outcome measure of how successful the transition has been. In another study, the independent living definition is tested in a natural experiment by comparing the skill levels of urban and rural students with handicaps.

A new area that includes a number of studies this year is the impact of a child with a handicap on the functioning of the family. In these studies, one is able to examine the effects on families and the support that the families are able to provide for the transition process.

Summary of Previous Volumes' Findings

Previous volumes of the Transition Literature Review included discussion of a total of 26 articles on independent living. The findings from these are summarized below and their particular relationships to the domains identified in the definition of independent living are noted.

A number of articles reviewed specific programs or assessed client satisfaction with service delivery from programs. Jones, Petty, Boles, and Mathews (1985) compared the types of services provided; and Whang, De Balcazar, and Fawcett (1983) studied client satisfaction and identified strengths and weaknesses of the centers. Others have also evaluated the services of independent living centers (Clowers & Belcher, 1979; Hart, Moilanen, & Bensman, 1983), and consumer satisfaction (Budde, Petty, & Nelson, 1984). The findings praise attempts by the centers to break the dependency of their clients by training them in a range of necessary life skills.

A large body of research in independent living focuses upon the various skills that persons need to live in adult society. Bell (1976) and Seltzer, Seltzer, and Sherwood (1982) indicate that the best adjustment to deinstitutionalized settings is made by those who are able to learn the most adaptive skills. These findings are similar to those of Schalock, Harper, and Carver (1981), Loughlin (1981), Gaule, Nietupski, and Certo (1985), and Sutter, Mayeda, Call, and Yangi (1980), who have all examined different influences on types of skills that their subjects had for their adjustments. In an 8- to 10-year follow-up study, Schalock and Lilley (1986) reported that those who were able to maintain their independence had less severe handicaps and higher levels of skills.

The impact of living arrangements on adjustment has also been studied. Lessard (1982) has developed a model of the types of accommodations available and the amount of independence that is associated with each. Landesman-Dwyer (1981) has reviewed the literature on the housing alternatives for those with mental retardation, primarily focusing on various types of group homes. Reagan, Murphy, Hill, and Thomas (1980) found that the most stability was reported for those who were placed back into their natural homes, rather than group or foster homes. In contrast, DeJong and Reed (1978) report that those living with their natural families had the greatest adjustment problems because of lack of autonomy and family problems.

Transportation and mobility are other factors which can impede independence. Bikson and Bikson (1981) claim that the availability of transportation is crucial to the attainment and continuation in competitive employment. Clowers and Belcher (1979) indicate that accessible public transportation becomes more critical as the severity of the disability increases.

Restrictions in social interactions are common among people with handicaps. Bell (1976) and McDevitt, Smith, Schmidt, and Rosen (1978) found that their subjects had problems developing satisfactory social lives, often just staying home to watch television alone. Contrasts were found in studies with people with hearing (Libbey & Pronovost, 1980) and visual impairments (Bikson & Bikson, 1981) who had spent much more time interacting with their nonhandicapped peers. However, increased severity of handicaps limited the social interactions.

An associated area is that of leisure and recreation. As was indicated above (Bell, 1976; McDevitt et al., 1978), much of the leisure time activity is restricted to watching television. A survey of parents (Kregel, Wehman, & Seyfarth, 1985) showed that most of the activities were passive, at home with the family, often watching television. There were very few reports of participation in sports.

There have been attempts to train leisure and sport behaviors. Wehman and Schleien (1980) and Agran and Martin (1987) use behavioral analyses to assess the abilities needed for various activities, and then used these as steps to train the behaviors. This approach also provides a way of assessing how suitable particular behaviors are for those with certain limitations.

A final assessment has been the measurement of the quality of life experienced by people with handicaps. This has been measured in a number of ways and using a number of different scales. Heal and Chadsey-Rusch (1985) looked at satisfaction with residences, community settings, and community services. Schalock and his associates (Keith, Schalock, & Hoffman, 1986; Schalock, 1986; Schalock, Harper, & Carver, 1981) have examined the influences of environmental control, community utilization, and family involvement on satisfaction. Schalock, Harper, and Carver also looked at employment, finances, leisure-time usage, and friendship patterns.

Sample Description

Handicapping Conditions. The sample populations for the various studies can be described in several ways. The first is to examine the handicapping conditions of the subjects. Table 6.2 indicates the distribution of articles reviewed in the first two volumes as well as in this volume.

As can be seen from Table 6.2, the three levels of mental retardation are still the most common conditions in the studies. There has, however, been a large increase in the numbers of studies in most of the other categories. The largest increases in the handicapping conditions represented in this year's volume are learning disabilities, speech impairments, and visual impairments. The broader coverage of handicapping conditions should facilitate a better understanding of the multifaceted nature of independent living and its impact on people with different handicapping conditions.

Sample Descriptions. In examining the articles and their findings, one should consider what type and how large a sample was used. In this way, the questions of who and what is being measured can be answered, and the answers can provide valuable information for those who wish to interpret further the relevance of particular articles for their own needs. (See Chapter 3 for a discussion of various research methods, their interpretations, and their limitations.)

Sample sizes and descriptions are presented in Table 6.3 for the studies focusing on independent living. The sizes of the samples studied range from two to 66,367 people; the smallest are case studies, and the largest report the analyses of client

Table 6.2. Distribution of Independent Living Studies by Handicapping Conditions

HANDICAPPING CONDITION	NUMBER INCLUDED LAST YEAR	NUMBER ADDED THIS YEAR
Learning Disabilities	1	13
Speech Impairments	0	9
Mental Retardation		
Mild	13	33
Moderate	13	27
Severe/Profound	11	25
Serious Emotional Disturbances	2	12
Hearing Impairments/Deafness	2	8
Orthopedic Impairments	2	13
Other Health Impairments	4	9
Visual Impairments	4	10
Deaf-Blindness	1	7
Educationally at Risk	0	5

records. Other methods include single subject interventions, questionnaires and surveys, analyses of national and state data sets, and true experimental designs.

A number of articles are reported as having no subjects. These are usually program descriptions, meta-analyses of a number of previous studies, or surveys of the people who run programs. There are several conceptual papers which discuss independent living and which should aid the reader in gaining a better

Table 6.3. Sample Sizes and Descriptions for Studies with Independent Living Outcomes

REC#	SIZE	SAMPLE DESCRIPTION
179	369	The sample consisted of people with epilepsy who were divided into two subgroups: those with secondary handicapping conditions and those without.
180	*	Several studies were examined.
184	5	The sample included 3 females and 2 males who were disabled by autism.
185	15	Individuals with mild mental retardation studied in 1960-61, restudied in 1972-73, and again in 1982.
187	25	Young adults ranging in age from 23 to 33 were interviewed for this project.
189	98	Agencies with independent living skills programs were compared in the areas of employed professionals, funding, types of disabilities and skills.
193	1,477	A questionnaire was sent to 10,000 disabled individuals of whom 1,477 responded.
195	*	Survey was not conducted.
198	35	Subjects were students from Lyons Township High School who attended a program administered under Title IV-C. Their ages ranged from 18 to 21 years.
201	12	Six families with mentally retarded members and six families with physically handicapped members.
202	*	Several surveys were consulted.
203	*	Standards for accreditation are examined.
204	66,367	Clients who were receiving services for mentally retarded clients from the state of California on July 1, 1984, and who were living in institutions, community care programs, health facilities, or with parents or relatives.
206	*	A program model is proposed.
208	*	A program model is proposed.

* - Sample size not identified

Table 6.3 Cont'd. Sample Sizes and Descriptions for Studies with Independent Living Outcomes

REC#	SIZE	SAMPLE DESCRIPTION
209	*	Several studies were examined.
210	*	The author's own experiences are shared.
211	*	A program model is proposed.
213	14,553	Subjects are from the High School and Beyond sophomore cohort of 1980. 3,758 identified themselves as having one of the handicapping conditions specified.
218	*	The article describes development and rationale for a quality of life questionnaire.
219	108	Subjects with learning disabilities, educable mental retardation, or mental retardation.
220	4	Adults with developmental disabilities attending a day treatment program.
222	6	Adults diagnosed as being mentally retarded. Average IQ = 40.
224	32	Individuals with neuro-muscular and/or skeletal disorders.
226	14	9 male and 5 female subjects with mild to moderate mental retardation.
228	68	42 adults without retardation and 24 adults with mild to severe mental retardation.
231	2	Adults with severe mental retardation living in a group home. Average IQ = 28.
234	463	298 group homes and 138 foster homes serving adults with severe mental retardation were surveyed.
236	64	32 students with mild learning handicaps and 32 students without handicaps.
242	48	Individuals with mental retardation living in homes managed by the local Association for Retarded Citizens.
244	4	High school students in special education classes who participated in a program teaching vocational skills at the American Telephone and Telegraph Company.
247	*	Analysis of 10 studies of teaching independent living skills to adults with mental retardation.

Table 6.3 Cont'd. Sample Sizes and Descriptions for Studies with Independent Living Outcomes

REC#	SIZE	SAMPLE DESCRIPTION
248	22	Teachers of secondary students with mental retardation in south central Indiana.
249	54	27 students with mental retardation were paired with 27 students without handicaps. The pairs were constructed using the variables of race, sex, grade, socioeconomic status, and extra curricular participation.
255	28	The subjects were in a residential school for emotionally disturbed and adjudicated youth. They took part in an 8-week elective class in leisure skills.
257	*	Parents of adolescents with Down's syndrome.
272	59	Experts in the field of mental retardation.
275	25	Landlords or managers of living quarters who had rented to people with mental retardation.
276	4	Men with visual impairments ranging in age from 17-22.
277	*	Several samples were examined.
279	4	Students at the Florida School for the Deaf and the Blind.
281	60	Students from the Special School District of St. Louis County.
283	3	Individuals were classified as multihandicapped and labelled severely or profoundly retarded.
284	4	The subjects were four male students identified as having autism and severe handicaps. Their ages range from 18-21 years.
286	2	Two males attending a class for autistic and severely handicapped students. IQ scores ranged from 30-55.
287	3	Students with moderate mental retardation.
289	288	Adults with various physical handicaps.
291	5	Ambulatory clients with mental retardation housed at a state residential facility.

Table 6.3 Cont'd. Sample Sizes and Descriptions for Studies with Independent Living Outcomes

REC#	SIZE	SAMPLE DESCRIPTION
292	369	Individuals with mental retardation living in special residential facilities. Median IQ = 54.
295	54	Adults with mental retardation.
296	8,879	Adults with mental disabilities.

understanding of the various ways in which it can be thought of and implications for the implementation of the various types of programs described.

Location and Level of Studies. Table 6.4 describes the studies in terms of their levels and locations. For local and state level studies, the abbreviation for the state in which they were conducted is included in parentheses. Approximately one- half of the studies added in this volume are descriptions and findings of activities at the local level. Another 20% are at either the state or national level.

There is still quite a high proportion of articles which describe programs and activities that attempt to promote or train independent living skills, as well as several research syntheses and meta-analyses. Included this year are two articles describing the findings of independent living studies in foreign countries.

Review of Current Literature

This year's independent living outcomes review is based on the 51 articles added to the database. Most articles present findings

Table 6.4. Level and Location of Studies on Independent Living Outcomes

REC#	LEV(LOC)	REC#	LEV(LOC)
179	LO(MI)	231	LO(MN)
180	RS	234	NA
184	LO(MD)	236	LO(CA)
185	LO(CA)	242	LO(NM)
187	LO(CA)	244	LO(CA)
189	NA	247	ME
193	ST(KS)	248	LO(IN)
195	PM	249	LO(VA)
198	LO(IL)	255	LO(CA)
201	LO(KS)	257	LO(RI)
202	RS	272	NA
203	PM	275	LO(NY)
204	ST(CA)	276	LO(AL)
206	PM	277	RS
208	PM	279	LO(FL)
209	RS	281	LO(MO)
210	PM	283	LO(IL)
211	PM	284	LO(CA)
213	NA	286	LO(CA)
218	PM	287	LO(CA)
219	ST(NE)	289	ST(AZ)
220	LO(CA)	291	LO(IN)
222	LO(IL)	292	CANADA
224	AUSTRALIA	295	IRELAND
226	LO(WV)	296	RS
228	LO(NY)		

KEY: LO - Local Study ST - State Study NA - National Study
MS - Multiple State Study MA- Meta-Analysis
RS - Research Synthesis PM - Program Model (__) State

of empirical studies in domains of independent living. One reports the results of a study that has tested the validity of the definition of independent living used for this review.

Harnisch, Fisher, and Carroll (1988) factor analyzed High School and Beyond data to develop scales which measured five of the independent living domains. When they compared the level of independent living of urban and rural youth with handicaps using these scales, they found that urban youth had scores below the population mean, but above those of the rural youth. However, rural youth with handicaps had higher scores on a number of the scales which measured social interaction and support.

Several articles describe programs to promote independent living. Budde and Bachelder (1986) focused on the interaction of persons with severe disabilities with the community environment and assistive services. They believe that services should be restructured to be responsive to the needs of persons with disabilities rather than imposing services that may not be wanted. In her attempt to relate disabilities to transitions within the female life-cycle, Watts (1983) also tries to improve the sensitivity of transition agencies to the special needs of women with disabilities. At the statewide level, Elmer, Webb, and Edgar (1987) found that for many of the services needed by people with handicaps, there were long waiting lists and delivery staff had case loads too large to provide adequate services.

Possession of skills and the ability to use them has been shown to have positive effects over time. Edgerton, Bollinger, and Herr (1984) followed a group of people with mental retardation over a 10-year period and found that those with the highest levels of skills were able to maintain community placement and independence over this time.

Iceman and Dunlap (1984) elicited information about the training and content of programs. Fifty-eight percent of the agencies responding indicated that they provided some form of structured independent living skills training, most frequently community awareness, money management, and health/hygiene. Lower on the list were legal awareness, family responsibility, and sex education. Dever (1987) surveyed 59 mental retardation experts who considered personal maintenance, relationships, living quarters, adaptation to community routines, vocational training, leisure, and travel activities the areas which need attention in education and transition.

Martin, Rusch, and Heal (1982) advise teaching a number of "community survival skills" such as travel, money management, meal preparation, and clothing and personal care. Independent living skill needs of people with deaf-blindness were addressed by Venn and Walder (1988). The curriculum focused on daily living and vocational skills. A video system rather than direct staff presence was used to monitor students' progress.

When asked what skills they thought it was necessary to learn (Lovett & Harris, 1987), 48 people with mild mental retardation rated social and vocational skills first, then personal, academic, and leisure skills. It must be noted that these subjects were asked to rate a list of skills provided by the researchers, not to generate their own lists.

Jones, Hannah, Fawcett, Seekins, and Budde (1984) focus on the consumer involvement and control aspects, self-sufficiency, and interventions to remove barriers to integration. Fawcett, Czyzewski, and Lechner (1986) studied decision-making patterns by examining the concerns of many people with disabilities to the development and implementation of policies to promote independent living.

The services of independent living programs have been examined in a number of other articles. Karan et al. (1986) have described community-based programs focusing on paraprofessional training, supported employment schemes, service/research programs in adaptive technology, and evaluation projects designed to improve communications. Shannon and Reich (1979) indicate that some areas of concern that must be addressed are the clothing and adaptive technology needs of people with physical handicaps, and that providing manufacturers with this information ought to result in better services in these areas. Zola (1982) has reported on the development and community integration services provided by the Boston Self-Help Center for persons with orthopedic and health impairments. Nichols (1982) has called for a mechanism to examine independent living service facilities and to provide accreditation of them to improve the services and accountability of such programs.

Although agencies provide many of the services needed for transition, the basic support must still come from within the family. Turnbull, Summers, and Brotherson (1983) conclude that there needs to be intervention to train family members, attention to the negative impact on family functioning, the extension of the parent-as-teacher role, and the coping strategies of the various family members. Zetlin and Turner (1985) examined the place of the family in the adolescent to adult transition of people with mild mental retardation. They found that the parents had to take a more active role in solving life event problems. However, the normative life goals were still the most salient for these subjects and their families. Coping can be a most serious problem for nonhandicapped siblings (Skrtic, Summers, Brotherson, & Turnbull, 1984). There needs to be evaluation of the position and role of each family member to demonstrate where each individual fits into the system.

Contradictory results were found in two studies which looked at family involvement. Schalock, Wolzen, et al. (1986) consider that family involvement is one other predictor of successful transition for people with learning disabilities, and mild, moderate, and severe mental retardation. However, Parmenter (1988) found that his sample of persons with orthopedic handicaps wished to increase the level of their independence by limiting the number of family visits to the rehabilitation facility.

The interaction with other members of the community was the focus of many of the studies added to the database this year.

Davies and Rogers (1985) examined the literature on social skill training for people with mental retardation and found that many did not receive adequate training to promote social interaction. They suggest starting with simple skills and moving to the more complex, with emphasis to be placed on verbal and nonverbal behaviors, affective behaviors, and social cognitive skills.

Schalock (1986) has measured the interaction of employees on and off the job, finding good rapport at work, but very little outside. Breen, Harding, Pitts-Conway, and Gaylord-Ross (1985) trained subjects with serious emotional disturbances in social interaction and initiation behaviors for use in breaks on the job. It was found that the subjects were able to learn the behaviors and to generalize them across appropriate settings. In a similar study in recreational settings, subjects with mental retardation were taught appropriate behaviors and interactions (Gaylord-Ross, Harding, Breen, & Pitts-Conway, 1984).

In a school, Zetlin and Mertaugh (1988) found that students with learning disabilities had fewer friends and less stable friendships than their nonhandicapped peers. Using a sociometric method, Sabornie and Kauffman (1987) showed that students with mild mental retardation were less well accepted and received more negative ratings than a matched sample of nonhandicapped students in their classes. Lewis and Altman (1987) examined how students with mild mental retardation felt about their peers. Subjects reported similar feelings toward those with and without mental retardation, suggesting that they had not internalized the negative stereotypes that are prevalent in society.

Chin-Perez et al. (1986) instituted a social interaction training program in high school for students with handicaps by integrating the students into academic and other regular courses, with nonhandicapped students acting as tutors. Results showed substantial gains in the behavior repertoires of the students with handicaps, especially in levels of social skills. Ashcroft (1987) also taught social interaction skills to his students with behavior disorders in a court school (juvenile detention center) in California. They learned, through task analysis and reinforcement, appropriate behaviors and responses to negative and positive social interactions within the juvenile detention center.

Perhaps the most significant level of social interaction that one expects of an adult is in the area of building sex roles and relationships. Lundstrom (1982) interviewed persons with mild mental retardation and found the desire to be married and to have children, or to develop other heterosexual relationships. Teachers of people with educable mental retardation believed that the students had distorted concepts of sexuality and held attitudes that often led to inappropriate behaviors (Bratlinger, 1988). The parents of students with Down's Syndrome were also questioned about their children's sexuality. Many of the children expressed interest in getting married, but about one-half of the parents wanted their children sterilized or given other birth control.

The area of leisure and recreation for people with handicaps is one that does not often receive sufficient attention. There may, however, be significant health and social impacts that result from them. Lagomarcino, Reid, Ivancic, and Faw (1984) taught residential clients with severe mental retardation dancing, training both appropriate physical movements, as well as the social amenities. Schleien and Larson (1986) looked at the training of leisure skills to a group with severe mental retardation at a local recreation center. This training led to the abilities to acquire age-appropriate leisure skills, use local facilities, and express their preferences about desired activities.

Storey and Gaylord-Ross (1987) developed a multi-component package to increase the rates of positive statements and social interactions in social and leisure activities. Self-monitoring and contingent reinforcement maintained high rates of positive behavior, but there was little generalization beyond the training setting. Williams, Fox, Christie, Thousand, Conn-Powers, and Carmichael (1986) report the implementation of a statewide interdisciplinary model for people with severe disabilities that facilitated systems change in developing opportunities for the use of recreational, special education, and vocational services.

There have been many other approaches to teaching skills to people with handicaps. Heal, Colson, and Gross (1984) used a true experimental design in which they taught community living skills based on an inventory of behaviors and skills that are needed to function in natural settings. Trained students showed significant improvement on the tasks.

Task analysis was also used by Smith and Belcher (1985) to teach specific skills to a group of subjects with autism in their group home. Single subject designs showed that each subject gained skills in the predetermined behaviors, with varying amounts of staff intervention needed. Walls, Crist, Sienicki, and Grant (1981) trained adaptive independent living skills to a group of people with mild to moderate mental retardation. The tasks were analyzed and specifically timed prompting cues were used to aid in the training, at times supplemented by physical guidance in the task.

Specific tasks were taught by Storey, Bates, and Hanson (1984) and LaCampagne and Cipiani (1987) using task analysis, a prompt hierarchy, and social reinforcement to teach coffee purchasing skills to six people with moderate to severe mental retardation. The training generalized to other, dissimilar restaurants, and was still present four to five months after the training. LaCampagne and Cipiani (1987) employed a partial-task, forward-chaining approach to train a group of people with developmental disabilities to pay bills and maintain check records. Another specific skill was taught by Vogelsberg and Rusch (1979) to a group of students with severe handicaps. Using pre-instruction, instructional feedback, and selected repeated practice, the subjects were trained to cross partially controlled intersections safely. This skill could lead to an increase in unaided mobility within the community.

With skills and mobility, one must also consider where in the community a person lives. Borthwick-Duffy, Eyman, and White (1987) found that client characteristics such as maladaptive behavior, age, ethnicity, medical problems, and functional skills are crucial in selecting a type of residential placement. These findings were echoed in a survey of landlords who had rented apartments to people with mental retardation (Salend & Geik, 1988). About one-half had some problems with these tenants, usually because of their poor levels of independent living skills or maladaptive behavior. Hull and Thompson (1980) found that IQ was the highest predicator of successful community placement, but this was also related to the ability to use community services. The variables of environmental adaptation and survival skill acquisition were significant predictors of how well people with mental retardation would adjust to community placements.

The need for various skills in community settings was looked at by Aveno (1987) who found that the behaviors of those in group homes and foster homes were quite similar, with those running the group homes indicating that their residents were in need of more outside employment or day-activity programs, with group homes reporting a much higher leisure activity score. However, this activity was often watching television. The desire that was expressed by the staff for more external activities reflects the findings of Kishi, Teelucksingh, Zollers, Park-Lee, and Meyers

(1988) in their comparison of the decision making of those with mental retardation and a sample of nonhandicapped peers. Kishi et al. found that those with mental retardation had fewer opportunities to make decisions in areas such as where to eat, what to wear, and how and with whom to spend free time.

In order to find employment, certain skills are required. Howze (1987) taught a group of subjects with visual impairments how to improve their interview skills, such as giving personal and job-related information and asking questions about the job. The skills needed for holding a job successfully were considered by Radin, Shapiro, and Lennox (1977), who found that their subjects with epilepsy differed by virtue of the presence of any associated handicap. Those with the additional handicaps seemed to perpetuate the stigma of epilepsy and refused to take responsibility for their employment actions, thus blaming epilepsy for their inability to succeed instead of focusing on the social and employment skills that they had or needed.

Future Research Directions

This volume of the Transition Literature Review has expanded the base of articles that deal with independent living and covered more of the areas that are identified in the definition that is used to organize the literature. Such a coverage also serves to uncover areas to which more research attention can be applied.

The long-term outcomes and impacts of a person's level of skills are not fully clear. Although a number of studies have focused on the successful placements of people with handicaps in community settings, these studies often rely on the level of functional skills that serve the person in home maintenance and some personal care. They do not often look to broader issues of satisfaction with quality of life and hopes and aspirations for the future.

The use of adaptive technology and adaptive housing is one area that has received attention from the analysis of the mechanical aspects of life. However, one could consider the psychological impacts that these have on people and whether they perceive that their life is really improved and that there could be a lessening of dependence on others. The issue of breaking dependencies is at the core of the definition that we use for our independent living reviews.

The issues relating the sexuality and sexual expression of persons with handicaps has been touched on in this review and is a current topic of concern and even litigation in parts of the community. It is a topic that evokes emotional responses, and also one in which there is little understanding of capacities, capabilities, and the fundamental rights of individuals with handicaps.

7

Summary

Adrian T. Fisher

The Transition Literature Review serves a number of purposes, the primary of which is informational, collection of information from research articles and presentation of summaries of these in the literature review chapters and the annotated bibliography. In the first three volumes, information from 296 articles examining the educational, employment, and independent living outcomes has been recorded and summarized.

The formal dissemination of the information from these articles is not restricted to the chapters of the Transition Literature Review. To store the information, a database system has been developed which is used systematically to record information from each of the articles. Once information is in the database, it can be retrieved in a variety of combinations to meet the needs of researchers and practitioners. A major step in our provision of information is making this database available to the public.

A summarization of transition studies is not sufficient to meet the challenges of understanding the nature of transition, the various ways in which it can be conceptualized, or its outcomes. Although the federal government has stated its concern as the preparation of young people with handicaps for competitive employment (Will, 1984), there are alternative ideas about the areas of adult life for which a person should be prepared (e.g., Halpern, 1985).

Another part of the informational purpose of the Transition Literature Review is the consideration given to alternative conceptualizations and outcome areas. Transition to competitive employment is seen as the major goal of educational programs for youth with handicaps; yet we need to define what is actually meant by competitive employment and the other measures of successful movement into the workforce. However, the outcome areas of education and independent living have also been chosen for study. By using these, it is possible to provide a broader picture of the areas of need and accomplishment that face youth with handicaps as they leave the high school educational system.

Along with the idea of establishing an informational base, our intention was the facilitation of planning and delivery of services to students in transition. Use of such an information base relies upon the belief that there are specific aims and goals of transition that can be articulated and achieved. In compiling the database and reviewing and reporting on articles, the aim has been to find and illustrate feasible alternatives in the transition from high school to community.

The idea of a constant information flow is shown as many of the analyses undertaken for the Digest on Youth in Transition (Harnisch & Fisher, 1989; Harnisch, Lichtenstein, & Langford, 1986) are derived from the literature reviewed for the Transition Literature Review: Educational, Employment, and Independent Living

Outcomes (Harnisch, Chaplin, Fisher, & Tu, 1986; Harnisch, Fisher, Kacmarek, & DeStefano, 1987); that is, there is an iterative system operating that allows the uncovering of issues in the literature review process which can then be applied to the analyses of the extant data sets. The process continues as the new statistical findings are fed back into the literature review system and shared through research dissemination procedures in publications and presentations.

By compiling a systematic information base, it is believed that we can serve not only as an analysis team for literature and data, but can also make a contribution by providing a form of needs analysis in the identification of the issues of transition.
The goals of transition are raised to the array of behaviors and skills that one needs to function as an adult in our society, and the areas in which the systems are currently not meeting these goals are clearly identified.

In this volume of the Transition Literature Review, there has been an expansion of the provision of information for the reader. Chapters analyzing the newly included articles in the outcome areas, employment, education, and independent living remain the basis of the monograph. As the database retrieval system is being made available on diskette for purchase, a chapter has been dedicated to an overview of the system and facilities available within it. We have included for the first time a chapter that examines ways in which transition research can be conducted and the strengths and pitfalls of the various approaches used. This chapter serves an educational role in helping readers assess the quality of research and the utility of reported findings for their own work.

Data Retrieval System

The data retrieval system is being made available to readers who wish to have access to the database themselves. The system will come with a set of programs and data files on one 5.25" or 3.5" floppy diskette and a manual to describe installation and operation of the system. To operate the system, the reader will require an IBM or IBM-compatible personal computer with a hard drive (at least 1.5 megabytes free space) and a copy of the dBASE III database program.

This database is the core of the data storage system for the information recorded from the articles in the Transition Literature Review. The retrieval program will allow the user to access information by handicapping condition, outcome area, or a combination of these two. Output can be an alphabetical list of APA-style references, annotated bibliography, or an abstract of the articles. This output can be selected to be shown on the computer screen, sent to a printer, or written in ASCII code to a file which can then be incorporated into word processing files.

Access to the database, and annual updates as more articles are added, should provide readers with a significant source of information related to the transition of youth with handicaps from school to community. Use of the database retrieval system should aid in identifying relevant articles and their findings to assist in future research or policy-making activities. But in using such a system, the reader must be aware of the strengths and weaknesses that are inherent within each of the articles.

Research Methodologies

The utility of reported research findings is limited by the quality of the studies conducted. To be able to evaluate the quality of the articles in the database and use the findings, the reader must have an appreciation of the various ways in which research can be carried out and the strengths and weaknesses of each approach.

The discussion of research into transition shows that most of the research is conducted under the general approach of quasi-experimental designs, with some using true designs and others case studies. The threats to internal and external validity of each type of design must be considered when one looks at the ways in which data were gathered and the uses of the findings of the studies.

There appear to be many poorly conducted studies in the transition literature, studies that do not control threats to internal validity and so are unable to provide a sufficiently strong base for inferring that the intervention used brought about the changes claimed. Other studies use such selective groups of subjects or specialized settings that the findings have little generalizability outside the research setting.

The concern about the strength of the controls employed in transition research has a basis in the real applications of the findings that are reported. Many of the studies that are discussed in this and the previous volumes of the Transition Literature Review are very important to the field and their results used for program and policy development. However, the ways in which the research was conducted limit the real life value of the findings.

Keeping in mind the potential strengths and weaknesses of the research methods, this year's review of the literature may be discussed.

Educational Outcomes

As with the previous years' review, the educational outcomes of youth with handicaps is a rich source of information about their academic preparation and achievement. Many of the studies that were reviewed for this volume reflect a growing use of modern technology in the education of persons with handicaps. Word processors and microcomputers have been shown to be helpful in assisting those with learning disabilities to learn mathematics and to write effectively. However, there are warnings that such technology is not an end in itself and must be designed and selected in a manner that will facilitate the skill building of the users.

With more people with disabilities attending or attempting to attend colleges, other issues arise. There is a need to provide individualized transition services to prepare youth for college and specialized services once they are there. There have been positive findings about the benefits of summer bridging courses between high school and college and the use of other preparatory strategies, especially for youth with learning disabilities whose academic achievement measured on standardized tests is often much lower than the norm. In addition, college GPAs can be affected by as much as 30% by the presence of a handicap in the student.

Despite the growth of transition services and college preparatory programs, youth with disabilities still face serious problems in college. A number of studies that have addressed various issues of college adjustment found that few colleges have specialized counseling for youth with learning disabilities or make curriculum changes to meet those needs. For other students, for example those with hearing impairments, participation in classes and discussion groups is severely limited.

A number of future research directions for educational outcomes have been suggested, including the follow-up of the development of appropriate technology to be used by persons with handicaps. Additionally, there needs to be put into place a system of support and evaluation of alternative curriculum models to determine which will best serve the educational needs of youth with handicaps.

Employment Outcomes

The gaining of a place in competitive employment is seen by many as the major goal of transition preparation. In this year's volume, articles have been reviewed which deal with a number of areas: effective employment programs, factors associated with successful transition, social skills, work-related behaviors, and employer attitudes.

Effective employment outcomes were able to be generated in a number of ways. Placement of workers with handicaps in a fast food restaurant reduced the employee turnover rate significantly, with one-half of those who left going to better jobs. The use of job exploration and the use of natural environment training were very helpful in providing employment for people with handicaps in a number of the studies. These were especially successful when the people were trained in settings and with skills that were able to be transferred to other settings and jobs. Experience with the actual tasks and work responsibilities seem to be the critical factors.

A number of factors appear to be associated with successful transitions to employment. Some of the factors are external to the individual -- parents who want them to work, participation in structured activities, experience in a structured work setting, while other factors were internal, such as the level of previous educational achievement having a significant impact on income.

For those with severe handicaps, several factors appeared common in association with employment transition. Appropriate work behavior, adequate job skills, the level of work as reinforcers, and the use of adequate personal skills were seen as critical variables in positive placement outcomes.

The use of social skills on the job and in nonwork-related settings are important to transition to employment. As an employee, the person with a handicap must be able to get along with supervisors and fellow employees. Thus, the need for skills used in work-related interactions to get equipment and help and in the informal settings at break times.

Adequate job skills are good predictors of successful transition to employment. A number of studies have examined ways in which such skills can be taught and monitored. Self-monitoring techniques have been taught to people with mental retardation and they increased their productivity. Behavior analysis techniques to break jobs down into component parts have also been successfully used in training job skills. Co-workers can also be used to teach job skills and to assist the person to develop adaptability and control over the work.

The use of skills is not enough if employers will not accept people with handicaps. Some employers reported that they were favorable to employees with handicaps, as long as there was no reduction in work load or involvement with the workers' personal lives. About one-half of the employers indicated that they would not hire people with learning disabilities.

For employees with mental retardation, there was good acceptance among some employers, especially for those receiving supported employment assistance. However, it was seen as an important role of service agencies to "sell" the skills of the employees to the employers in order gain greater acceptance.

Independent Living

There is a range of skills that are necessary for successful transitions to independent living and a positive quality of life. The literature reviewed for this volume dealt with a number of skill areas and ways in which these skills could be taught to people with various handicaps. One of the most common methods was the use of behavior analysis to determine the skills required for certain settings and others which cut across settings.

Social interaction skills are necessary for most aspects of community life. The problems identified in the articles range from lack of skills in behavioral repertoires to aggressive responses to social situations. A number of studies reported ways in which the better responses were uncovered using behavior analysis and then trained into skill repertoires. Use of behavior analysis techniques was generally teamed with the use of self-monitoring and reinforcement techniques.

Other skills are also needed for community life. Analysis of these skills and training programs demonstrate a range from being able to cross a street alone to sexuality. Leisure skills allow the person the chance to gain a healthier lifestyle and also to interact with others. Training is often required that teaches the physical aspects of leisure behavior, as well as a focus on the social interactions that are needed for cooperative workouts.

A major finding about the training of skills is the nature of the training settings. Skills that are taught in classrooms and other isolated settings often do not generalize to real world sites. However, those that are taught in the real settings are learned much more quickly and can be transferred to other dissimilar settings. It appears that the feedback that is received from the real-life use of the skills is critical to their learning and using these skills.

The last set of skills are those needed for the higher levels of self-advocacy. A number of studies have looked at the use of skills as people act as their own advocates in getting the services they require, or in influencing policy formation. One of the most requested responses that was desired from independent living centers was the teaching and transfer of advocacy responsibilities to those with handicaps rather than continuing with the service personnel.

Discussion

The Transition Literature Review is a source of information about various aspects of transition from high school to the community. This task is undertaken through analysis of articles in the three outcome areas and through the development of the database system. With the release of the database system in disk form, there will be the opportunity for many more people to have direct access to this informational source.

It must be noted that the use of the database should be viewed with some caution and an awareness of the ways in which research can be conducted and interpreted; the findings may not always be for the reasons expected. For this, we have included our chapter on research methods with the discussion of differing approaches and threats to validity.

Finally, it is also necessary to note that it is extremely rare that just one study or report can provide the reader with a definitive answer to the problems faced in transition. As is shown in the literature review chapters and the above summary, many studies must be viewed together to show the strengths and limitations of research findings.

8

Annotated Bibliography

This chapter presents summaries of the articles added to the database this year and reviewed in Chapters 4, 5, and 6. In this bibliography, the reader will be able to see, by the way in which the articles are presented, the document arrangement that has been used in the construction of the database (which is more fully described in Chapter 2). The contents of this chapter were generated directly from the dBASE III files and then prepared for publication using WordPerfect, a commercially available word processing program.

The summaries in this bibliography are for the articles added to the database this year and are arranged in alphabetical order. The previously recorded article summaries are available in Volume 2 of the Transition Literature Review, and an alphabetical listing of all articles in the database by their outcome focus is presented in Appendixes B, C, and D.

The summary sections in this bibliography enable the readers to identify quickly the features that are important to them. Thus, one can identify the handicapping conditions studied, sample sizes, sample composition, and the outcome focus of each article. Table 8.1 provides the reader with a key to the abbreviations used for handicapping conditions.

Table 8.1. Key to Abbreviations for Handicapping Conditions

Handicapping Condition	Abbreviation
Learning Disabilities	LD
Speech Impairments	SI
Mental Retardation:	
Mild	MR_MI
Moderate	MR_MO
Severe/Profound	MR_SP
Serious Emotional Disturbances	SED
Hearing Impairments and Deafness	DEAF
Orthopedic Handicaps	ORTHO
Other Health Impairments	HI
Visual Handicaps	VISU
Multiple Handicaps	MULTI
Deaf-Blindness	BLIND
Educationally at Risk	DIS

Ackerman, A. M., & Shapiro, E. S. (1984). Self-monitoring and work productivity with mentally retarded adults. Journal of Applied Behavior Analysis, 17(3), 403-407.

HANDICAPPING CONDITION :
MR_SP

PRIMARY FOCUS : EMPLOYMENT OUTCOME
Employment variables include: use of self-monitoring, productivity, and sheltered workshops.

ABSTRACT :

This article examines the use of self-monitoring to increase the productivity of five adults with mental retardation in a sheltered workshop. Data were collected daily during a 30-minute generalization period. Following baseline, verbal praise, prompts, and physical encouragement were administered contingent on productive behavior on a specific task during the intervention period. In the next phase, self-monitoring was trained during the intervention period. During both phases, baseline conditions prevailed in the generalization periods. In the final phase, self-monitoring was extended across the intervention and generalization periods. Results showed that increased productivity levels, evident when praise and prompting were being administered, maintained with self-monitoring alone. Minimal generalization across time was observed until self-monitoring was begun in the generalization period.

REC # : 263

Adams, W. H. (1984). Learning and employment opportunities for adult learners with special needs. Paper presented at the American Vocational Association Convention, New Orleans, LA.

HANDICAPPING CONDITION:
DIS VISU ORTHO DEAF MR_MO MR_MI SI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: job finding skills, vocational assessment, resume writing, interview behavior, and work interviews.

ABSTRACT

A program for adult learners with special needs has been conducted in Salem County, New Jersey, for five years. The program was created under a Public Law 94-482 grant and since then has been supported by a Department of Human Services grant, by various service clubs, and by the local board for vocational education. The program has three phases. In phase one, a two-segment continuing education option is offered in which participants are provided with individual and small group counseling, vocational assessment, and prevocational training. The second phase of the program involves the participation of clients in selected vocational skill training courses along with relevant support services. The third phase of the program involves adult learners with special needs who participate in full-time vocational-technical training programs. The key element of this option is the identification of skills in which the adult not only has an interest, but also the reasonable chance to acquire those skills necessary for employment. Job counseling and job placement support services are also provided. The program has been serving about 35-50 persons at a time, with a 40% job placement rate. Its success has been enhanced by its emphasis on the Sheppard counseling concept to support participants, by an assessment system, and by an employment-assistance program. Problems in the program have stemmed from a changing clientele that is increasingly severely mentally handicapped, lack of transportation for students, and overcoming the identification, location, and motivation problems of the participants.

REC # : 178

Agran, M., Salzberg, C. L., & Stowitschek, J. J. (1987). An analysis of the effects of a social skills training program using self-instruction on the acquisition and generalization of two social behaviors in a work setting. Journal of the Association for the Severely Handicapped, 12(2), 131-139.

HANDICAPPING CONDITION:
MULTI SED MR_SP MR_MO

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment outcomes measured were: success rates with self-instruction to teach specific social behaviors.

ABSTRACT

This investigation examines the effects of a social skills training program using self-instructions in facilitating the acquisition and generalization of two social behaviors in a work setting. Specifically, this study examined the effects of the training package in increasing the percentages of initiations with a supervisor when employees ran out of work materials and/or needed assistance. Training effectively increased the percentages of initiations with a supervisor when the employees ran out of work materials and/or needed assistance. The results indicated that the training effectively increased the percentages of occurrence in one or both of the target behaviors for all five participants. Furthermore, the training resulted in generalized responding across settings for all participants and maintained for up to 13 weeks. These results suggest the feasibility of a social skills training package using self-instructions to help persons with moderate and severe handicaps acquire, maintain, and generalize social behaviors in a work setting.

REC # : 238

Allen, T. E. (1986). Patterns of academic achievement among hearing impaired students: 1974 and 1983. In A. Schildroth and Krachner (Eds.), Deaf children in America (pp. 161-206.). San Diego, CA: College Hill Press.

HANDICAPPING CONDITION:
MULTI DEAF

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Education variables include: region, program type, ethnicity, level of hearing loss, and additional handicap status.

ABSTRACT

Much of the data for this research was collected during two major norming projects: the 1974 norming of the sixth edition of the Stanford Achievement Test (Madden, Gardner, Rudman, Karlsen, & Merwin, 1972) and the 1983 norming of the seventh edition (Gardner, Rudman, Karlsen, & Merwin, 1982) with representative samples of hearing-impaired students from special education programs throughout the United States. This chapter examines these two norming projects in depth. It addresses three major questions: (a) What are the average achievement levels attained by hearing impaired students throughout the United States? (b) Have the achievement levels of hearing impaired students changed over the last ten years? and (c) What factors account for achievement among hearing impaired students? The chapter focuses on achievement in two academic areas: reading comprehension and mathematics computation.

REC # : 230

Ashcroft, R. (1987). A conceptual model for assessing levels of interpersonal skills. Teaching: Behaviorally Disabled Youth, 28-32.

HANDICAPPING CONDITION:
SED

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The students were trained in social skills and taught to overcome acting out aggressive behaviors.

ABSTRACT

The problems of teaching social skills to adolescents with behavior disorders are discussed through program and literature review, specifically the problems and the need for a conceptual base for a conceptual model, and a conceptual base for social programming. A rationale is given for a conceptual model, and this conceptual model is presented and applied to programming an 8-week leisure skills class for 28 adjudicated wards of juvenile courts at a residential treatment center for emotionally disturbed youth. The results of this application are discussed.

REC # : 255

Atkins, B. J., & Wright, G. N. (1980). Three views: Vocational rehabilitation of blacks. Journal of Rehabilitation, 46(2), 40-49.

HANDICAPPING CONDITION:
LD SI MR_MI MR_MO MR_SP SED HH DEAF ORTHO HI VISU MULTI BLIND DIS

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Evaluation of discrimination and access to vocational rehabilitation services for blacks.

ABSTRACT

Blacks with disabilities were compared to whites in this descriptive study using closure data from all the states and territories participating in the public rehabilitation program. Unequal treatment of blacks was revealed in all major dimensions of the public vocational rehabilitation process: A large percentage of black applicants were not accepted for service; of applicants accepted for service, a larger percentage of black cases were closed without being rehabilitated; and blacks whose cases were closed as "successfully rehabilitated" were more likely than whites to be in the lower income levels. Black rehabilitants were provided less training and education even though their needs were greater because of pre-service lower education levels.

These inequalities existed throughout all regions of the country. Implications for vocational rehabilitation program remediation are suggested here and in the response by Humphreys and Provitt.

REC # : 199

Aveno, A. (1987). A survey of activities engaged in and skills most needed by adults in community residences. The Journal for the Association for the Severely Handicapped, 22, 125-130.

HANDICAPPING CONDITION:
MR_SP

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Investigation into types of leisure activities and frequency with which adults participated. "Need" skills were also investigated.

ABSTRACT

A national survey of 298 group homes and 138 foster homes serving adults with severe mental retardation was conducted in order to identify activities engaged in and skill competencies needed by adults living in these community residences. Residential staff were asked to rate 78 functional activities or skills in 8 categories; 31 of the activities were rated on a frequency scale and 47 skills were rated on a "need" scale. Foster home and group home staff gave similar ratings in five of the six "need" categories; however, group home staff indicated a greater need for outside work or day activity programs for their residents than did foster home staff. Furthermore, group home staff reported significantly higher frequency ratings for leisure activities than was reported in foster homes.

REC # : 234

Barbaro, F. (1982). The learning disabled college student: Some considerations in setting objectives. Journal of Learning Disabilities, 15(10), 599-603.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
This article outlines one college's system for services to the learning disabled. The conceptual framework, educational components, and social services components are described in detail.

ABSTRACT

Many references have been made in the literature to the deficits in social interpersonal skills that often follow the learning disabled into adulthood, yet few college LD programs address these deficits. Adelphi University's program is unique in that it has a dual focus: academic and social growth. Dr. Barbaro's article describes a model for direct intensive intervention designed to enhance psychological growth within the college environment. Social adequacy is a critical factor for successful functioning, not only in social settings, but also in academic settings and the work world.

REC # : 290

Becker, R. (1976). Job training placement for retarded youth: A survey. Mental Retardation, 14(3), 7-11.

HANDICAPPING CONDITION:
MR_MI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: type of job, jobs that do not fall into DOT classification, and problem evaluation.

ABSTRACT:

A survey was made to assess the types of jobs to which youth with mental retardation were assigned for on-the-job training. Forty work-study coordinators from 35 school districts in 12 states and the District of Columbia completed a questionnaire reporting on 1,438 youth with mental retardation who were enrolled in a work study program for the school period 1972-74. Trainees were assigned to 185 different jobs distributed among 14 major industries and miscellaneous classifications.

REC # : 227

Bellamy, G. T., Sheehan, M. R., Horner, R. H., & Boles, S. M. (1980). Community programs for severely handicapped adults: An analysis. Journal of the Association for the Severely Handicapped, 5(4), 307-324.

HANDICAPPING CONDITION:
MULTI SED MR_SP MR_MO

PRIMARY FOCUS: EMPLOYMENT OUTCOME
The vocational opportunities provided at adult care centers are analyzed.

ABSTRACT

During the last 10 years, day programs for adults with severe handicaps have become a familiar component of community services. This paper examines the current status of those programs, with particular reference to the vocational options provided to participants. Concerns are raised about the lack of work opportunities, disincentives to work, lack of federal coordination, and absence of entitlement. Strategies for effecting needed change are offered for policymakers, advocates, researchers, and public school personnel.

REC # : 177

Bennett, R. E., & Ragosta, M. (1985). Technical characteristics of post-secondary admissions tests for handicapped examinees: A review of research. The Journal Special Education, 19(3), 255-262.

HANDICAPPING CONDITION :
VISU ORTHO DEAF LD

PRIMARY FOCUS : EDUCATIONAL OUTCOME
Educational variables include: SAT scores, ACT scores, and comparison with nonhandicapped individuals.

ABSTRACT :

This paper reviews research on the technical adequacy of post-secondary admissions tests for examinees with handicaps. First the performance of students with disabilities relative to the general population is explored. Of the four disability groups discussed, the admissions test performance of students with learning disabilities and of students with hearing impairments appears most discrepant from the general test-taking population. Evidence relating to the validity and reliability of admissions tests for examinees with and without handicaps is reviewed in the text. The results of this review suggest no dependable differences in reliability or validity across these populations. However, because the data on which this conclusion is based are so limited, further research is needed before the technical characteristics of admissions tests for examinees can be fully evaluated.

REC # : 271

Benz, M. R., & Halpern, A. S. (1986). Vocational preparation for high school students with mild disabilities: A statewide study of administrator, teacher and parent perceptions. Career Development of Exceptional Individuals, 9(1), 3-15.

HANDICAPPING CONDITION:
VISU HI ORTHO DEAF SED MR_MO MR_MI SI LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Results are presented in three areas: (a) current vocational opportunities, (b) coordination of opportunities, (c) areas in need of improvement.

ABSTRACT

The purpose of this study was to investigate the current status of and satisfaction with vocational preparation opportunities for high school students with mild disabilities, as identified by LEA administrators, teachers, and parents. Based upon the findings of this study, there are four recommendations for improvement that should be addressed in future program and policy development efforts: (a) increase availability of appropriate vocational opportunities, (b) examine prerequisites to participation of special education in vocational education activities, (c) assign responsibility for coordinating vocational opportunities, and (d) increase communication and collaboration between special and vocational educators.

REC # : 239

Berkell, D. E. (1987). Vocational assessment of students with severe handicaps: A review of the literature. Career Development for Exceptional Individuals, 10(2), 61-75.

HANDICAPPING CONDITION:
BLIND MULTI ORTHO SED MR_SP MR_MO

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: assessments of physical conditions, vocational preferences, and cognition of intellectual ability.

ABSTRACT

This article examines extant literature on the vocational assessment of students with severe handicaps. Several of the skills and behaviors that are generally addressed by vocational evaluators are discussed. Specific areas of attention include: (1) adaptive behavior, (2) cognitive ability, (3) physical condition, (4) academic environment, (5) vocational interests, and (6) leisure/recreation. Final recommendations for assessment programs are also included: (1) to determine attainable vocational goals, (2) to identify specific skills and behaviors needed by the student to succeed in reaching these goals, and (3) to determine the most effective instructional methods to develop these skills and behaviors.

REC # : 265

Bernacchio, C., & Fortinsky, R. (1987). Improving the post-secondary education and employability of learning disabled students. Paper presented at the Third Northeast International Symposium of Exceptional Children and Youth.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: numbers of hours employed, level of satisfaction, type of employment, use of special vocational services, income, and future vocational plans.

ABSTRACT

This study is the result of a three-year federally funded project to provide model transitional services to adults with learning disabilities in three Maine counties. Thirty-two subjects with learning disabilities and 32 students without disabilities were used as a control group. The five primary objectives of the study are to: (1) improve the assessment instrumentation being used to identify and evaluate SLD students; (2) document skill training needs for SLD students to succeed in employment or higher education; (3) identify resources to provide skill training in these areas; (4) implement an interdisciplinary strategy for coordinating transition services for SLD students; and (5) pilot a tracking system to provide data for program evaluation purposes.

REC # : 268

Bierley, M., & Manley, E. (1980). The learning disabled student in a college environment: A report of Wright State. Journal of Learning Disabilities, 13(1), 12-15.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Educational variables include: academic advising, tutorial services, and counseling/advising.

ABSTRACT

This article discusses Wright State University's program for students with learning disabilities. The thrust of the program is to provide services on three levels: academic, tutorial, and counseling. These three areas are discussed at length within the article. A sample group of 10 students with learning disabilities is also included with documentation on grade point averages, drop-out rates, and educators evaluations about students' needs, as well as problems experienced within the program.

REC # : 294

Borthwick-Duffy, S. A., Eyman, R. K., & White, J. F. (1987). Client characteristics and residential placement patterns. American Journal of Mental Deficiency, 92(1), 24-80.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The present study was designed to examine patterns of residential placement for people receiving services for mentally retarded individuals from the state of California.

ABSTRACT

Recent emphases on deinstitutionalization and community placement have been accompanied by the development of a range of residential placement alternatives and by shifts in the control of placement decisions. In this study we examined the patterns of placement into these alternatives for 66,367 clients receiving services for mentally retarded persons from the state of California and evaluated the ability of client characteristics to discriminate among clients in four residential placement types. Results of the discriminant analyses suggest that client characteristics, including maladaptive behavior, age, ethnicity, medical problems, ambulation, toileting, and speech, are important factors in the consideration of residential placement for people with mental retardation.

REC # : 204

Bratlinger, E. (1988). Teachers' perceptions of the sexuality of the secondary students with minor mental retardation. Education and Training in Mental Retardation, 23(1), 24-37.

HANDICAPPING CONDITION:
MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Teachers were interviewed about their secondary students attitudes, behaviors, and knowledge about sex and sexuality.

ABSTRACT

Using a naturalistic research design, 22 teachers of secondary students classified as EMR were interviewed about their students feelings, attitudes, and behaviors related to sexuality. Results indicate that these students have limited and or distorted information about sexual topics and hold attitudes that, teachers believe, result in problematic situations for them and others.

REC # : 248

Breen, C., Haring, T., Pitts-Conway, V., & Gaylord-Ross, R. (1985). The training and generalization of social interaction during breaktime at two job sites in the natural environment. Journal of the Association for the Severely Handicapped, 10, 41-50.

HANDICAPPING CONDITION:
SED

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The study attempts to train subjects in the social interaction skills necessary for association with their nonhandicapped co-workers.

ABSTRACT

Four high-school aged students with autism and severe handicaps were trained to initiate and sustain social interactions with nonhandicapped peers in a commonly shared breakroom at two community sites. The generalization of social behavior to non-trained co-workers was probed in the same setting during natural breaktimes. A multiple-baseline across subjects design was used to assess the effectiveness of a training package based on concurrent training of chains of responses using systematic prompting and reinforcement of correct behavior. Generalization was promoted using a multiple exemplar strategy. The results showed that all participants acquired a chain of social break behaviors using one peer trainer. Two participants displayed generalization of social responses prior to the acquisition of the complete chain. Two participants required training with multiple peers before generalization occurred.

REC # : 284

Brickey, M., & Campbell, K. (1981). Fast food employment for moderately and mildly mentally retarded adults: The McDonald's project. Mental Retardation, 19(3), 113-116.

HANDICAPPING CONDITION:
MULTI MR_MO MR_MI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: variations in net income, problems with employer/employee relations, and problems with access to social security funds.

ABSTRACT

To reduce employee turnover (175% crew turnover in 1979), McDonald's restaurants entered into a project with the Franklin County Program for the Mentally Retarded. Seventeen moderately and mildly mentally retarded sheltered workshop employees were trained and placed in McDonald's restaurants. One year later, 10 were still employed (turnover rate of 41%). Three of seven who left did so to take full-time jobs. Second year turnover was 0%. Participants' net incomes for part-time employment (after deduction of taxes, bus fare, and eventual discontinuation of Social Security and/or Supplemental Security Income benefits) were substantially lower than if they had stayed at the workshop. The study points out the employability of moderately and mildly retarded adults in fast food restaurants and the need for financial incentives and/or full-time employment to make such employment financially advantageous.

REC # : 225

Brown, F., Weed, K., & Evans, I. M. (1987). Perceptions of handicapped and nonhandicapped students of the importance and utility of their high school curricula. Education and Training in Mental Retardation, 22(3), 185-196.

HANDICAPPING CONDITION:
MR_MO MR_MI

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Students evaluated skills taught by educators; special emphasis was placed on skills rated most important and most frequently used.

ABSTRACT

This study examined students' perceptions of their high school curricula as part of a more general research program on the evaluation of special education. Interviews were conducted with 106 handicapped and nonhandicapped high school juniors and seniors who were enrolled in either academic courses of study, occupational programs, or special education programs in public school or center-based settings. Students were asked to identify the vocational, leisure, domestic, and school skills that they thought were most important, the criteria they used to make these judgments, and the skills they used most frequently. Results also indicated that nonhandicapped students generally selected skills that were "general" vs. "specific," and used "future" to judge importance more than the "present." The study also found that there was no consistent relationship between frequently used skills and important skills. The present investigation indicates the need to consider the students' perceptions when evaluating the significance of educational programs.

REC # : 250

Budde, J. F., & Bachelder, J. L. (1986). Independent living: The concept, model, and methodology. *Journal of the Association for Persons with Severe Handicaps*, *11*(4), 240-245.

HANDICAPPING CONDITION:
DIS BLIND MULTI VISU HI ORTHO DEAF SED MR_SP MR_MO MR_MI SI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
This article discusses guiding influences that led to changes in the independent living concept and model and presents a state-of-the-art definition of independent living.

ABSTRACT

The emerging independent living (IL) field enables persons with severe disabilities to live independently and control their lives. The concept and model have implications for rehabilitation, education, and related human service fields. This article discusses guiding influences that led to changes in the IL concept and model and presents a state-of-the-art definition of independent living. It discusses general application of the IL concept. An IL model is presented that focuses on improving the community environment and offering assistive services to persons with severe disabilities. Finally, future IL challenges are discussed.

REC # : 206

Bullis, M., & Foss, G. (1986). Assessing the employment-related interpersonal competence of mildly mentally retarded workers. American Journal of Mental Deficiency, 91(1), 43-50.

HANDICAPPING CONDITION:
MR_MI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: knowledge of interpersonal skills at the workplace, among others.

ABSTRACT

Interpersonal competence has been identified as a key variable in the vocational success of adolescents and adults with mental retardation. Unfortunately few tools are available that address this critical skill area. The purpose of this article is to describe the Test of Interpersonal Competence for Employment (TICE), a measure designed to assess mildly retarded worker's knowledge of interpersonal skills in the employment setting. This test was developed using the Behavioral-Analytic Model of Test Development (Goldfried & D'Zurilla, 1969). This procedure called for the detailed analysis of the problems that workers with mild retardation experience in the vocational setting and the identification of correct responses to those problems by competitive employers. The TICE was standardized on both high school and workshop populations. Overall, the initial psychometric properties of the test are uniformly adequate and encouraging.

REC # : 269

Bush-LaFrance, B. (1988). Unseen expectations of blind youth: Educational and occupational ideas. Journal of Visual Impairment and Blindness, 82(4), 132-136.

HANDICAPPING CONDITION:
VISU

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Questions were asked about future educational plans.

ABSTRACT

This article addresses two questions: Is blindness a disadvantage to educational or occupational expectations? and, Do expectations vary according to the degree of vision? A comparison of two independent samples of legally blind and sighted students in Ontario, Canada, indicated that legally blind students generally had lower occupational, but not educational, expectations than did their sighted counterparts. Regression analyses, using only the sample of blind students, revealed an unanticipated negative relationship between expectations and the students' degree of vision. The students' self-concept of academic ability, socioeconomic status, friends' educational plans, and degree of vision accounted for 38 percent ($p < .001$) of the variance in the level of educational expectations, while their self-concept of academic ability, socioeconomic status, and degree of vision accounted for 33 percent ($p < .001$) of the variance in the level of occupational expectations.

REC # : 260

Campbell, P., Hensel, J.W., Hudson, P., Schwartz, S.E., & Sealander, K. (1987). The successfully employed worker with a handicap: Employer/employee perceptions of job performance. Career Development for Exceptional Individuals, 10(2), 85-94.

HANDICAPPING CONDITION:
MULTI VISU ORTHO DEAF SED MR_MO MR_MI LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: differences in evaluation of work performance by employers and their employees with handicaps.

ABSTRACT

Successful employment of individuals with handicaps has received considerable attention in recent years, especially with regard to the transition from school to the world of work. Certain skills may be critical not only for the transition process but also for continued employment. Agreement between employees and their employers as to the presence or absence of certain skills in the work setting might facilitate a successful work experience. The purpose of this study was to examine whether there are differences between successfully employed workers with handicaps and their employers with regard to the existence or demonstration of learning, work habit, and independence behaviors in the work place.

REC # : 241

Cardoza, D., & Rueda, R. (1986). Educational and occupational outcomes of Hispanic learning disabled high school students. Journal of Special Education, 20(1), 111-126.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Three domains of interest were defined: (a) educational aspirations, (b) course-taking activities, and (c) educational outcomes.

ABSTRACT

The purpose of this study was to examine the educational characteristics of six subgroups of the High School and Beyond data set. These included senior Hispanic students with learning disabilities, senior Anglo students with learning disabilities, and senior Anglo students without learning disabilities. In addition three parallel subgroups were included.

The major analyses of the data reflected an attempt to compare the groups in terms of their course-taking behavior, educational aspirations, and educational and occupational outcomes. The results indicated that there were significant differences between the handicapped and nonhandicapped groups. However, in general, there were no differences between the Anglo and Hispanic handicapped peers.

REC # : 246

Chin-Perez, G., Hartman, D., Sook Park, H., Sacks, S., Wershing, A., & Gaylord-Ross, R. (1986). Maximizing social contact for secondary students with severe handicaps. The Journal of the Association for the Severely Handicapped, 11(2), 118-124.

HANDICAPPING CONDITION:
ORTHO MR_SP MR_MO

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: social initiations, social receptions, negative responses, and number of sessions.

ABSTRACT

This article describes a secondary program for students with severe handicaps which attempts to maximize the social contact between persons with and without handicaps. The program selectivity integrates students into academic and other regular education courses. Nonhandicapped peers are used for tutoring purposes as well as research assistants in a social skills training project. A survey completed by a variety of important others indicated substantial improvements in the behavioral repertoires of the students with severe disabilities, particularly in the area of social skills.

REC # : 287

Clarke, J. Y., Greenwood, L. M., Abramonwitz, D. B., & Bellamy, G. T. (1980). Summer jobs for vocational preparation of moderately and severely retarded adolescents. Journal of the Association for the Severely Handicapped, 5(11), 24-37.

HANDICAPPING CONDITION:
VISU SED SI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
The teenagers performance increased dramatically through time spent with special co-workers. Parents attitudes toward their children also changed.

ABSTRACT

Vocational preparation of adolescents with moderate and severe handicaps has been increasingly emphasized in the area of instruction in the natural environment on skills that are directly applicable to employment situations. The program reported in this article combined this emphasis on realistic instruction with CETA services to provide fully paid community based work experiences to high school students with moderate and severe handicaps. Nine students learned a variety of community jobs and earned an average of $950 for their summer work. In addition to change in performance of students with handicaps, the project noted change in the attitude of parents toward their teenagers. Overall the project was successful in providing remunerative work experience to a population of students who have been historically denied such vocational opportunities.

REC # : 186

Cobb, B., & Hasazi, S. B. (1987). School-aged transition services: Options for adolescents with mild handicaps. Career Development for Exceptional Individuals, 10(1), 15-23.

HANDICAPPING CONDITION:
MR_MI LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Suggestions are made for more thorough and individualized transition planning for high school students with mild disabilities.

ABSTRACT

This paper focuses on those programs and services at the high school level that can meet the transitional service needs for students with mild handicaps. The assumption guiding the development of this article was that secondary special education programs need to include as part of their curricula for students with mild handicaps employment placement or post-secondary education placement outcomes as well as academic achievement outcomes. The article identifies eight exemplary program elements: Individualized transition plan, integration within secondary vocational education programs, paid work experience, job-seeking skills curriculum, flexible staffing patterns, active parent/consumer involvement, follow-up employment status and data management, and transfer across agencies.

REC # : 240

Collins, T., Engen-Wedin, N., Margolis, W., & Price, L. (1987). Learning disabled writers and word processing: Performance and attitude gains. Minneapolis, MN: Unpublished manuscript, University of Minnesota.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Students with learning disabilities in college were trained to write using word processors.

ABSTRACT

This article demonstrates that college students with learning disabilities (LD) can achieve at a level consistent with that of non-LD peers in mainstream writing courses taught by regular faculty in a workshop setting using microcomputer word processors. The study examined change in attitude and writing performance in a group of writers with LD enrolled among a larger group of non-LD students. The group with LD achieved grades comparable to those of their non-LD peers in the same setting. The group with LD persisted to completion at rates comparable to the rates of the non-LD group. Attitude toward writing as measured by a scale of apprehension and as articulated in interviews changed significantly and positively for the group with LD.

REC # : 212

Cook, S. B., Scruggs, T. E., Mastropieri, M. A., & Casto, G. C. (1985-86). Handicapped students as tutors. The Journal of Special Education, **19**(4), 483-492.

HANDICAPPING CONDITION:
SED LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Educational variables include: age, length of tutor training, type of subjects tutored, among others.

ABSTRACT

A meta-analysis was conducted on available research documentary effectiveness of handicapped students as tutors of other students. Nineteen articles yielding 74 effect sizes were located. Results indicated that: (a) tutoring programs were generally effective; (b) tutees generally gained more than tutors; and (c) tutor and tutee gains on self-concept and socioeconomic ratings were small, while gains on attitude measures were longer. Implications for instruction and further research are given.

REC # : 278

Dalke, C., & Schmitt, S. (1987). Meeting the transition needs of college-bound students with learning disabilities. Journal of Learning Disabilities, 20, 176-180.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
This article discusses academic preparedness and methods of training the skills necessary for transition to college.

ABSTRACT

This article presents the Project ASSIST high school to college transition program, developed at the University of Wisconsin-Whitewater, which assists high school students with learning disabilities in adjusting to the university setting. The transition from a structured, controlled environment to a less structured, open setting can be overwhelming. In an effort to facilitate the students' abilities to cope with the issues and activities facing them during the transition period, this five-week, non-credit, post-high school/pre-college summer model program emphasizes six components including: effective support, diagnostic evaluation, academic reinforcement and instruction, strategy training, awareness of support services available on campus, and a general campus awareness.

REC # : 217

Davies, R. R., & Rogers, E. S. (1985). Social skills training with persons who are mentally retarded. Mental Retardation, 23(4), 186-196.

HANDICAPPING CONDITION :
MR_SP MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables: nonverbal motor behaviors, verbal behaviors, affective behaviors, and social cognitive skills.

ABSTRACT

The placement of institutionalized persons with mental retardation in the community has resulted in increased interest in social skills. If persons with mental retardation are to participate in activities with members of their community, they will need to develop skills that promote social interaction. Currently, however, there is little evidence to suggest that deinstitutionalized clients are being adequately integrated into the community. This article reviews social skills interventions that have been attempted with persons who are mentally retarded, beginning with the less complex skills and moving to the multifaceted skills. Summary tables are presented which list the skill(s) taught, the instructional methods used, the effectiveness of the intervention, and the generalization effects.

REC # : 277

DeFazio, N., & Flexer, R. W. (1983). Organizational barriers to productivity, meaningful wages and normalized work opportunity for mentally retarded persons. Mental Retardation, 21(4), 157-163.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Improvements in job services for the handicapped are suggested: increasing availability of employment outside workshops, more meaningful work inside workshops, among others.

ABSTRACT

Sheltered vocational services for persons with mental retardation are analyzed from several organizational, philosophical, and programmatic perspectives. Targets for remedial action are identified.

REC # : 237

Dever, R. B. (1987). A national survey on the taxonomy of community living skills. Bloomington, IN: Center for Innovation in Teaching the Handicapped, Indiana University.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: personal maintenance, personal relationships, living quarters, adaption to community routines, vocational training, leisure and travel activities.

ABSTRACT

This report focuses on a taxonomy of community living skills. The Taxonomy of Community Living Skills represents a serious attempt to focus instruction for retarded individuals on life in the community, and to assist curriculum developers in all settings to coordinate their work. The taxonomy is not a curriculum; rather it is a statement of goals that can assist curriculum developers in the work of developing approaches to teach people to be part of the fabric of the community. Developed at Indiana University, the document was sent to professionals in the field of mental retardation for evaluation. Response was primarily favorable with few suggestions for improvement.

REC # : 272

Dunham, T. (1986). Learning disabled college writers project: Evaluation report 1985-86. Minneapolis, MN: Learning Disabled College Writers Project, University of Minnesota.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Educational outcomes include: educational technology, academic performance, entrance placement scores, and transition to employment.

ABSTRACT

The Learning Disabled College Writers Project was developed to help learning disabled college students to master composition skills through development of skills in the use of microcomputer word processors. The intervention included initial training on the microcomputer, support, and a career exploration component.

More than 3,000 students were informed of the Project; 21 learning disabled students participated in the three sections of narrative composition and three sections of expository composition offered winter and spring quarters, respectively.

The students with learning disabilities entered the Project with writing skills significantly below those of the students without learning disabilities. While the skills of both groups improved, the learning disabled students did not improve to the point that their performance was comparable with the non-disabled as demonstrated on standardized test situations.

The performance in college coursework, however, both before and during the intervention, was very similar. Students held a C average and had an overall credit completion ratio of 86 or higher. Both groups had a B average in the composition courses with approximately 90% completion.

REC # : 273

Edgar, E., & Levine, P. (1988). A longitudinal study of graduates of special education. Interchange, 8(2), 3-5.

HANDICAPPING CONDITION:
VISU HI ORTHO DEAF SED MR_SP MR_MO MR_MI LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: employment rate, wages earned, and unemployment rates.

ABSTRACT

This current study in Washington involves the collection of data on former students at standard time intervals and the addition of a contrast group of nonhandicapped students who graduated from the same public schools at the same time as the special education students. The design of the study enabled the authors to evaluate outcomes by disability type, over time, and compare the results with those of a nonhandicapped cohort. The data presented here represent interim results of the study.

REC # : 243

Edgar, E., & Levine, P. (1987). Special education students in transition: Washington state data 1976-1986. Seattle, WA: Experimental Education Unit, University of Washington.

HANDICAPPING CONDITION:
DIS BLIND MULTI VISU HI ORTHO DEAF SED MR_SP MR_MO MR_MI LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: type of employment, number of hours per week, income, job training, and job satisfaction.

ABSTRACT

This study examines former students from special education classes from the state of Washington; 1,292 out of an attempted 2,750 students were contacted. The collected data include: post-school education and training, employment status and history, weekly hours and salary, how jobs are obtained, job satisfaction, post-school residential status, as well as satisfaction with and recommendations for the school district. All data are analyzed by handicapping condition and gender. Cross-tabulations of variables conducted between school districts, as well as between handicapped and non-handicapped groups are also included. This study also includes several in-depth case studies and includes an annotated bibliography.

REC # : 254

Edgar, E., & Levine, P. (1986). Washington state follow-up studies of post-secondary special education students in transition. Seattle, WA: Networking and Evaluation Team, Experimental Education Unit WJ-10, University of Washington.

HANDICAPPING CONDITION:
BLIND MULTI VISU HI ORTHO DEAF SED MR_SP MR_MO MR_MI LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: Type of job, how job was obtained, income, and job training.

ABSTRACT

The target population included in this study are former special education students classified in any of the following categories: mildly mentally retarded, moderately mentally retarded, severe and profoundly mentally retarded, orthopedically disabled, multiply handicapped, health impaired, neurologically impaired, hearing impaired, deaf, visually impaired, blind, deaf-blind, learning disabled and behavior disordered.

Data collected include: post-school education and training, employment status and history, weekly hours and salary, how jobs are obtained, job satisfaction, post-school residential status, history and satisfaction with recommendations for the school district. All data are analyzed by handicapping condition and gender. Cross-tabulations of variables are also included between school districts, and between the handicapped and nonhandicapped groups.

REC # : 253

Edgerton, R. B., Bollinger, M., & Herr, B. (1984). The cloak of competence: After two decades. American Journal of Mental Deficiency, 88(4), 345-351.

HANDICAPPING CONDITION:
MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: life satisfaction, social competance, life-stress, dependence on benefactors, and quality of life.

ABSTRACT

Fifteen persons with mild mental retardation originally studied in 1960-1961, and restudied in 1972-1973, were studied again in 1982. The quality of their lives over the past decade was reexamined with an emphasis on personal and social resources for coping with chronic or acute stress. This study found that these persons were less dependent on others than they had been previously. Moreover, compared to other aging persons with mental retardation described in the literature, these persons were more hopeful, confident, and independent, despite ill health, stressful life events, and the lack of assistance from mental retardation service agencies.

REC # : 185

Elmer, J. F., Webb, S. L., & Edgar, E. (1987). Summary of existing data base on adult services for persons with developmental disabilities in Washington state. Seattle, WA: Child Development and Mental Retardation Center, University of Washington.

HANDICAPPING CONDITION:
SED MR_SP MR_MO MR_MI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: place of residence, social needs, current employment status, and mental health needs.

ABSTRACT

This article examines the extant data on adult services for persons with developmental disabilities in Washington state. In essence this is a review study with data gathered from various agencies dealing with special populations. Some of the issues addressed include: employment status, social status, problems with the law, mental/emotional health counseling, and residential status.

REC # : 296

Faas, L. A. (1987). Personality patterns of successful and unsuccessful learning disabled adults. Paper presented at the American Educational Research Association Annual Conference, Washington, DC.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
The study tries to examine the relationship between various personality patterns and successful transition to employment.

ABSTRACT

Differences in personality patterns, verbal performance, IQ, and gender of successful and unsuccessful adults with learning disabilities were examined. Variations in Verbal IQ made the greatest contribution to differences between successful and unsuccessful subjects. The persister personality type, when found in developmental phase, also contributed significantly to the variance. Gender and performance IQ were not significant contributors to the variance. Significant differences were found between the incidence of the basic personality types in the subjects with learning disabilities and Kahler's adult population. Exploratory application of Kahler's Process Communication Model to adults with learning disabilities suggests that this model may be of considerable value to those who wish to increase their understanding of students and adults with learning disabilities.

REC # : 214

Fawcett, S. B., Czyzewski, M. J., & Lechner, M. (1986). A grassroots approach to policymaking for persons with physical disabilities. Journal of Rehabilitation, 52(1), 59-63.

HANDICAPPING CONDITION:
ORTHO

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Development of a grass-roots state policy by disabled individuals.

ABSTRACT

In an age of "New Federalism," continued progress in achieving social goals for disabled citizens may require that they create their own agendas for local improvement. This report describes the development and use of a statewide survey to assess service and community concerns from the perspective of persons with physical disabilities. Disabled citizens' ratings of importance and satisfaction with selected issues were used to pinpoint strengths and problems in the state. A policy research process was used to establish an agenda for state executive and legislative initiatives based on the empirically derived concerns of persons with physical disabilities.

REC # : 193

Flexer, C., Wray, D., & Black, T. (1986). Support group for moderately hearing impaired college students: An expanding awareness. The Volta Review, 80, 223-229.

HANDICAPPING CONDITION:
DEAF

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Education variables include: educational technology, support services, and personal levels of hearing loss.

ABSTRACT :

College students with congenital, moderate hearing handicaps have a cluster of needs that typically go unrecognized and or unserviced. It is generally assumed that moderately hearing-impaired students with previous mainstream experience can succeed at the university level without special services. Testing these students reveals a general lack of knowledge about hearing loss, the auditory system, assistive listening devices, conversational strategies, and college services to which they are entitled. This article discusses the development of an information-support group designed by clinical supervisors at the University of Akron in Akron, Ohio, to meet these students' needs. Group intervention strategies are also discussed.

REC # : 288

Friedrich, D., Fuller, G., & Davis, D. (1984). Learning disability: Fact and fiction. Journal of Learning Disabilities, 17(4), 205-209.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
The research procedures developing a Michigan State definition of "learning disability" are documented.

ABSTRACT :

Based on approximately 1,600 referrals of learning disabled, educable mentally impaired, emotionally impaired, other disabled and regular students, 94 empirically derived formulas for assessment of learning disability were used. The most discriminating formula, which included WISC, WRAT and grade level variables resulted in moderate coefficients. An external validity study supported the original research conclusions. Because of the modest discriminating ability of even the best empirically derived formula, additional defining measures of the learning disability were described.

REC # : 182

Gallegos, G. E., & Kahn, M. W. (1986). Factors predicting success of underprivileged youths in job corps training. The Vocational Guidance Quarterly, 34(3), 171-177.

HANDICAPPING CONDITION:
DIS

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: work and school, socioeconomic indicators, and success rates within the corps.

ABSTRACT :

This article examines the factors associated with the success rates of youths who enroll in the Job Corps training program. The researchers used a biographic information blank to gather information. The sample consisted of 125 individuals, 85 of whom had been enrolled in the center for over 90 days at the time of study. The remaining 40 had remained enrolled for less than 90 days at the time of study or had dropped out before completion.

Chi-square analyses were used to determine which biographic items differentiated the successful group from the unsuccessful group. Several items were found to be significant. If the individual was born outside the southwest, the success rate was greater. Those persons who were engaged in a structured activity just prior to their enrollment in the corps were more successful. Ethnicity was also a significant factor, with the Orientals, Caucasians, and Blacks having the highest success rates.

Discriminant function analysis was also used on much of the data, but the authors state that these results are to be considered exploratory and primarily the source of hypothesis. These items include: age, level of education, ethnicity, and homesickness. The authors note the consistency of these findings with those of other studies which examine the success rates of youth seeking meaningful employment. The need for restructuring programs to include those who are presently "unsuccessful" is also stressed.

REC # : 191

Gardner, J. B., & Campbell, P. H. (1987). Technology for persons with severe disabilities: Practical and ethical considerations. The Journal of Special Education, **21**(3), 122-132.

HANDICAPPING CONDITION:
VISU HI ORTHO DEAF

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Education variables include: assessments of learners needs, training of educators, and ethical ramifications.

ABSTRACT

Technological advances relevant to the needs of persons with severe handicaps are emerging at a rapid rate. These devices and adaptions have significant potential for enhancing opportunities for integration, independence, and personal choice for this group of individuals. This article discusses several critical issues related to the use of technology: (a) obstacles to the use of adaptions and devices, (b) strategies for the selection, design, and use of adaptions and technological devices, and (c) an approach for incorporating technology into the integrated team planning process. Consideration is given to ethical and philosophical issues that must guide the application of new technological advances.

REC # : 280

Gaylord-Ross, C., Forte, J., & Gaylord-Ross, R. (1986). The community classroom: Technological vocational training for students with serious handicaps. Career Development for Exceptional Individuals, 9(1), 25-33.

HANDICAPPING CONDITION:
MULTI DEAF SED SI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: ability to learn a technological task, adaption to a community classroom situation, and development of peer tutoring relationships.

ABSTRACT

This article describes a community based, vocational training program for students with severe handicapping conditions. Students were taught technological work tasks in a research laboratory setting. The goal of the program was for students to acquire appropriate work behaviors as well as specific technical job skills that would generalize to future employment settings.

REC # : 223

Gaylord-Ross, R. J., Haring, T. G., Breen, C., & Pitts-Conway, V. (1984). The training and generalization of social interaction skills with autistic youth. Journal of Applied Behavior, 17(2), 247-299.

HANDICAPPING CONDITION:
SED

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: social skills, leisure and recreation, as well as community interaction.

ABSTRACT

Two experiments were conducted to increase the initiations and duration of social interactions between autistic and nonhandicapped youths. Experiment 1 taught two autistic youths to initiate and elaborate social interactions with three age-appropriate and commonly used leisure objects: a radio, a video game, and gum. The students were first taught to use the objects and subsequently instructed in the related social skills. The youths generalized these social responses to other nonhandicapped peers in the same leisure setting. A second experiment trained a third youth with autism to emit similar social/leisure skills. The use of the leisure objects and the related social skills were taught at the same time. The autistic youth learned these skills and generalized them to other handicapped peers in the same leisure setting. The importance of teaching generalized social responding in particular subenvironments was emphasized.

REC # : 286

Goldberg, R. L. (1987). College students with learning disabilities at a competitive university. Paper presented at the 65th Council on Exceptional Children International Conference, Chicago, IL.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
The study examined the psycho/educational performance and coping strategies of students with learning disabilities.

ABSTRACT

Many colleges and universities recognize that students with learning disabilities are on campus, but most institutions do not alter curricula or provide specialized services for undergraduates with learning disabilities. This exploratory study examined many variables relating to college students with learning disabilities at a competitive university without a special program for students with learning disabilities. The study used psycho/educational assessments, interview data, and examination of academic work. Control subjects and those with learning disabilities differed on most psycho/educational assessments, and in some areas of past and current functioning. The study provided descriptive data about students with learning disabilities attending a selective university. It also delineated coping strategies of college students with learning disabilities.

REC # : 216

Harnisch, D. L., Fisher, A. T., & Carroll, C. (1988). Analysis of seven behavioral domains of independent living. Paper presented at the American Council on Rural Special Education Annual Conference, Monterey, CA.

HANDICAPPING CONDITION :
HI ORTHO DEAF SI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables were analyzed to discuss underlying domains. Comparisons were also made between various groups on independent living skills.

ABSTRACT :

This study compares youth with and without handicaps in urban and rural settings in the independent living domains: (1) self-care and advocacy skills, (2) accommodation and living arrangements, (3) employment, education, and training, (4) transportation and mobility, (5) use of generic community services, (6) recreation and leisure activities, as well as (7) community interaction. The types and proportions of handicaps varied when the type of community (urban versus rural) and ethnicity were considered, with there being very high numbers of Hispanic students with learning disabilities in rural areas. Scales were developed from existing High School and Beyond variables which expert judges sorted into appropriate domains. Factor analysis was used to assign items to subscales. These demonstrated rural youth lagging in areas of computer skills, career and postsecondary educational aspirations, and in the utilization of resources. Rural youth had more involvement in extracurricular activities and their work experience. However, specific handicapping condition groups, most notably the rural youth with orthopedic disabilities exceeded all others in their level of independent living. A discriminant function analysis was used to compare groups of youth by their community type and specific handicapping condition resulting in two significant functions; an achievement dimension and an affiliation dimension.

REC # : 213

Heal, L. W., Colson, L. S., & Gross, J. C. (1984). A true experiment evaluating adult skill training for severely mentally retarded secondary students. American Journal of Mental Deficiency, 89(2), 146-155.

HANDICAPPING CONDITION:
MR_SP

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Subjects were taught community living skills based on an inventory of skills and behaviors needed to function in natural settings.

ABSTRACT

Skill acquisition by secondary-level students with severe mental retardation was assessed on functional community and living skills task analyses. Students were trained in natural settings according to a behavioral analysis of the curriculum into systematic teaching and error-correction procedures. Classroom training in the district high school supported the teaching that occurred in the community. The evaluation of student performance on specific skills was done using random assignment to training and control conditions in a cross-over design. Students showed significantly greater gains on those tasks for which they were trained than on those for which they were not. In addition to this specific skill training, a daily checklist showed significant progress by all students on a broad array of skill sequences. Discussion stressed the contribution of the project to ideologically appropriate public school programs for students with severe mental retardation, to behaviorally based instructional technology, and to evaluation using true experimental designs.

REC # : 198

Howard, R., & Campisi-Johns, C. (1986). Disabled students in the California community colleges: A report. California Community Colleges Chancellor's Office Disabled Student Programs and Services.

HANDICAPPING CONDITION:
DIS BLIND MULTI VISU HI ORTHO DEAF SED MR_SP MR_MO MR_MI SI LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Positive data showing a successful transition to employment for handicapped students exiting California's community colleges.

ABSTRACT

In an effort to change the great underutilization of human resources represented by 65% unemployment rate among persons with disabilities, the California Community Colleges have established Disabled Student Programs and Services (DS P&S) to help students with disabilities attending the community colleges acquire the marketable skills they need to compete and advance in the job market. The most recent data from DS P&S programs clearly documents the positive impact these programs have had on the lives of persons with disabilities and society in general. The summary of the data indicates that 92% of graduates with disabilities who responded to the survey went on to employment or advanced education. 51% of the graduates with disabilities are currently employed while 41% transferred to another school after completing their community college education.

REC # : 205

Howze, Y. Z. (1987). The use of social skills training to improve interview skills of visually impaired young adults: A pilot study. Journal of Visual Impairment and Blindness, 81(6), 251-255.

HANDICAPPING CONDITION:
VISU

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Three social skills were trained: giving job related information, sharing personal information, and asking questions.

ABSTRACT

Social skills training was investigated as a treatment strategy for four visually handicapped young adult males. Training took place on the campus of a state residential school for the blind in a classroom designed to resemble an office. A combination of instructions, modeling, behavior rehearsal, and constructive feedback was used in training, students were pre-and post-interviewed by employers in the local business who had extensive experience in interviewing youth. Interview sessions were tape recorded. Observers scored the frequency of occurrence of the three target behaviors, and increased rates of positive interview behaviors, and increased rates of positive, interview behaviors were obtained for all four students during training. Students transferred acquired behaviors in a follow-up interview with an actual employer. The results suggest that a social skills training package may be effective in increasing certain verbal behaviors of severely visually handicapped young adults during the job interview. Further, findings support the theory that programs serving low-incidence populations may need to include role-playing and modeling in their job-training programs.

REC # : 276

Hughes, C., & Peterson, D. L. (1988). Utilizing a self-instructional training package to increase on-task behavior and work performance. Manuscript submitted for publication.

HANDICAPPING CONDITION:
MR_MI SI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: self-instruction, productivity, and on-task performance.

ABSTRACT :

The effects of a self-instructional training package on the on-task behavior of four adults with mental retardation employed in a sheltered workshop was investigated. The subjects chosen had been identified by their work supervisors as persons who exhibited a high incidence of off-task behavior. Results of the study indicated that on-task behavior increased substantially across all subjects following self-instructional training, and that behavior generalized from the training setting to the actual work environment.

REC # : 259

Hull, J. T., & Thompson, J. C. (1980). Predicting adaptive functioning of mentally retarded person in community settings. American Journal of Mental Deficiency, 85(3), 253-261.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: Community awareness, social maturity , and adaptive functioning.

ABSTRACT

The impact of a variety of individual, residential, and community variables on adaptive functioning of persons with retardation was examined using a multiple-regression analysis. Individual characteristics (especially IQ) accounted for 21% of the variance, while environmental variables, primarily those related to normalization, accounted for 35% of the variance. The data suggest that environmental normalization may be an effective technology for the promotion of independent functioning of retarded people as well as an ideology.

REC # : 292

Hunter, P. N., & Zuger, R. R. (1979). Easing the transition from school to work for students with severe disabilities: A summer work experience. Rehabilitation Literature, 40(20), 299-304.

HANDICAPPING CONDITION:
MULTI VISU HI ORTHO

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: transportation use, type of disability, and type of employment.

ABSTRACT

Disabled young people often do not have the opportunity to develop a strong vocational identity because of their lack of participation in summer employment or other work experiences. The Placement and Job Development Department at the Institute of Rehabilitation Medicine in New York designed and implemented an ongoing summer employment program in the private sector in 1974 to provide severely physically disabled high school and college students with meaningful paid work experiences and the opportunity for integration into the normal work world, and the enhancement of skills, work habits, and knowledge of jobs. Pilot study findings support informal evidence that the program affects the vocational development of the participants. Companies consistently report increased awareness and sensitivity among their staff as a result of hiring a disabled summer worker. The program described in the article can be replicated successfully elsewhere and expanded to include other disability groups.

REC # : 261

Iceman, D. J., & Dunlap, W. R. (1984). Independent living skills training: A survey of current practices. Journal of Rehabilitation, 50(4), 53-56

HANDICAPPING CONDITION:
BLIND MULTI VISU DEAF SED MR_SP MR_MO MR_MI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The methods used by agencies to teach independent living skills are compared and evaluated.

ABSTRACT

This article reports the results of a nationwide survey of independent living skills training programs. The study elicited information concerning the methods of instruction, curricula, materials, personnel, types of instrumentation, instructional and living environments, and follow-up procedures employed in independent living skills training programs. The scope and content of programs varied widely. A lack of standardized assessment tools was evident, and the respondents acknowledged the lack of effective instructional materials.

REC # : 189

Jones, M. L., Hannah, J. K., Fawcett, S. B., Seekins, T., & Budde J. F. (1984). The independent living movement: A model for community integration of persons with disabilities. In W. Christian, G., Hannah, & T. Glahn (Eds.), Programming effective human services: Strategies for institutional change and client transtion. (pp. 315-335). New York: Plenum Press.

HANDICAPPING CONDITION:
BLIND MULTI VISU ORTHO DEAF MR_SP MR_MO MR_MI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The independent living movement is described, and a model for community integration is presented.

ABSTRACT

A historical description of the independent living movement is given along with the model it offers for community integration.
The movement is described as one initiated by consumers who asserted their right to live in the community and their belief that disabled individuals can participate in all aspects of community life. Independent living centers are described as the community-based, nonprofit, nonresidential service agencies that provide the assistance and support needed by consumers to live in the community. They promote consumer involvement and control, self-sufficiency, and a focus on interventions to remove barriers to independence that may be presented by the environment.

REC # : 195

Karan, O. C., Brandenburg, S., Sauer, M., Yoder, D. E., Mathy-Laikko, P., Villarruel, F., & Dolan, T (1986). Maximizing independence for persons who are developmentally disabled: Community-based programs at the Waisman Center University Affiliated Facility. Journal of the Association for Persons with Severe Handicaps, 11(4), 286-293.

HANDICAPPING CONDITION:
VISU SED MR_SP MR_MO MR_MI SI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The main content of the article is a description of services that will lead to independent living.

ABSTRACT

All university affiliated facilities conduct interdisciplinary programs of training, education/service, research, and outreach in the area of developmental disabilities. In this article four representative programs of the Waisman Center University Affiliated Facility in Madison, Wisconsin are described. They all share the following common features: each has been designed to augment and support the independence of persons who are developmentally disabled, each is either conducted in a community-based setting or designed to train persons who will work in such settings, and each is used as a resource for the conduct of interdisciplinary training for educators and clinicians.

Included in this article are descriptions of (a) a paraprofessional training program that leads to an associate degree in community services, (b) an innovative supported employment program specifically designed for adults still living in public institutions, (c) a service and research program that provides persons who do not have speech capability with the technology and training for communicating, and (d) an evaluation and research program for promoting communication skills in persons who are mentally retarded, deaf, and blind.

REC # : 208

Kerachsky, S., & Thornton, C. (1987). Findings from the STETS transitional employment demonstration. Exceptional Children, 53(6), 515-521.

HANDICAPPING CONDITION:
MR_SP MR_MO

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: income, competitive vs. sheltered employment, and influence of IQ level on the impact of the program.

ABSTRACT

This article describes the model for and the implementation of the Structured Training and Employment Transitional Services (STETS) demonstration, a major transitional employment intervention funded by the U.S. Department of Labor. In terms of the evolution of transitional employment type initiatives, STETS was important for two reasons: it was the largest of such efforts yet undertaken in this social area, and its design and evaluation were based on an experimental methodology, thus generating the most robust and accurate findings yet available on the transitional-employment concept. The evaluation of STETS focused on five basic issues: participants subsequent labor market behavior, use of school and training programs, public transfer dependence, life styles, and the benefits versus the costs of the intervention. The results indicate that young adults with mental retardation can perform competently in competitive employment, and that STETS-type programs help such individuals achieve their employment potential.

REC # : 266

Kishi, G., Teelucksingh, B., Zollers, N., Park-Lee, S., & Meyers, L. (1988). Daily decision-making in community residences: A social comparison of adults with and without mental retardation. American Journal on Mental Retardation, 92(5), 430-435.

HANDICAPPING CONDITION:
MR_MO MR_MI SI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The choice-making opportunities of persons with mental retardation and persons without are examined.

ABSTRACT

In addition to physical placement in the community, the extent to which individuals experience personal autonomy may provide a crucial measure of the attainment of a more normalized lifestyle. Everyday choices and choice making opportunities of 24 persons with mental retardation living in community group homes were compared to choices of 42 adults without retardation. The adults with mental retardation had significantly fewer opportunities to make decisions on such matters such as: what to eat or wear, how to spend free time, and with whom to live. Results were discussed in terms of the need to operationalize meaningful improvements in the lives of persons with mental retardation that go beyond the appearance of the physical environment.

REC # : 228

Knapczyk, D. K., Johnson, W. A., & McDermott, G. (1983). A comparison of the effects of teacher and peer supervision on work performance and on-task behavior. TASH Journal, 8(4), 41-48.

HANDICAPPING CONDITION:
MR_SP

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: sheltered workshop, production levels, and on-task behavior.

ABSTRACT

This study evaluated the effectiveness of teacher and peer supervision in increasing levels of on-task behavior and work performance in a pre-vocational setting. Six individuals with severe retardation served as subjects and were assigned an assembly task. Results indicated that close supervision by either a teacher or peer was superior to baseline condition. In addition, results showed that peer supervision produced higher levels of on-task behavior among subjects than did teacher supervision. It was suggested that delegating some student supervisory responsibilities permits a teacher to use instructional time more effectively and affords the supervising peer an opportunity to learn valuable work-related skills.

REC # : 270

Krauss, M. W., & MacEachron, A. E. (1982). Competitive employment training for mentally retarded adults: The supported work model. American Journal of Mental Deficiency, 86, 650-653.

HANDICAPPING CONDITION:
MR_MO MR_MI LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
This study examined the placement of persons with mental retardation in competitive employment using the supported work model.

ABSTRACT

The supported work model designed to train persons with mental retardation for competitive employment, was initiated as a pilot program in 1979. The placement rate was 50%. In order to investigate the predictors of placement, we conducted an empirical analysis using the theory of work adjustment perspective. Results indicated that the participants' work behavior and job skills, ability to meet the requirements of the jobs, and employment reinforcements were predictors of competitive placement.

REC # : 221

LaCampagne, J., & Cipiani, E. (1987). Training adults with mental retardation to pay bills. Mental Retardation, 25, 293-303.

HANDICAPPING CONDITION:
MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: skill training, chained training modeling, among others.

ABSTRACT

The effectiveness of a forward chaining, partial-task training method on the acquisition of bill-paying skills via check writing with four adults with developmental disabilities who attended a day treatment program was assessed. Results indicated that the procedures were effective in training three skill areas of bill paying to high levels of performance. Further the skills maintained over a 2-month follow-up and generalized across novel types of bills. Social validation data obtained through bank personnel and teachers examining pre- and post-treatment checks indicated that the training procedures produced a skill level that would lead to a successful financial transaction.

REC # : 220

Lagomarcino, A., Reid, D. H., Ivancic, M. T., & Faw, G. D. (1984). Leisure dancing instruction for severely and profoundly retarded persons: Teaching an intermediate community living skill. Journal of Applied Behavior Analysis, 17(1), 71-84.

HANDICAPPING CONDITION:
MR_SP

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: Appropriate arm and leg movements, appropriate social behavior, and appropriate language behavior.

ABSTRACT

The authors evaluated an approach for teaching an intermediate community living skill via a leisure-dance activity to institutionalized severely and profoundly retarded persons. The targeted skill was considered intermediate in contrast to a community living skill per se because it was based on successful performances of higher functioning, noninstitutionalized retarded persons as opposed to nonhandicapped individuals. Generalization was programmed by way of multiple trainers and training settings. Results during structured assessments showed that all four residents acquired the dance skills and that both serial training and follow-up supervision were necessary for skill acquisition. Generalized increases in appropriate dancing at dances attended by the participants and retarded persons from the community were also demonstrated. However, in most cases some active supervision by caregivers was needed to enhance the generalized improvements. Results are discussed in terms of the applicability of this approach for validating goals when training other community-related skills to low-functioning populations.

REC # : 291

Lewis, T. J., & Altman, R. (1987). Attitudes of students with mental retardation toward their handicapped and non-handicapped peers. Education and Training in Mental Retardation, 22(4), 256-261.

HANDICAPPING CONDITION:
MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Data are analyzed in terms of age, and handicapped versus nonhandicapped.

ABSTRACT

Despite the large number of studies examining attitudes of non-handicapped toward their peers with mental handicaps, the attitudes of the students who are handicapped themselves toward their peers are rarely addressed. This study examined the attitudes of students with mental retardation toward their peers who are mentally handicapped and non-handicapped at the elementary, junior, and senior high levels using two separate levels of attitude. Results indicated that students with mental retardation do not express significantly different attitudes toward either peer group. However, elementary aged students were found to hold more negative attitudes toward peers both mentally handicapped and non-handicapped than either junior or senior high school students. The absence of more negative attitudes toward students with mental retardation was interpreted as suggesting that these students may not internalize the expressed negative attitudes of the non-handicapped.

REC # : 281

Lignugaris, B., Salzberg, C. L., Stowitschek, J. J., & McConaughy, E. K. (1986). Social interaction patterns among employees in sheltered and nonprofit business settings. Career Development Quarterly, 35, 123-135.

HANDICAPPING CONDITION:

PRIMARY FOCUS: EMPLOYMENT OUTCOME
The variables in this study were nature and type of social interaction on the job.

ABSTRACT

This study examined the social interactions during breaks and work in sheltered and non-sheltered settings. In the first study, social interactions of developmentally disabled workers were examined during breaks and work in two sheltered workshops. It was found that workers in these settings were active initiators and active participants in paired and group interactions during break and work. In the second study the social interactions of both handicapped and nonhandicapped employees were studied in the same nonsheltered work setting. These data supported the findings in the first study.

REC # : 251

Lovett, D. L., & Harris, M. B. (1987). Independent skills for adults with mental retardation: The clients' point of view. Mental Retardation, 25(6), 351-356.

HANDICAPPING CONDITION:
MR_MI SI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: vocational skills, social skills, personal skills, academic and leisure activities.

ABSTRACT

The present study was conducted to determine whether adults with mental retardation could provide useful information about what skills they considered important for successful community living and whether these skills would correspond to those previously rated as important by persons who had significant contact with such individuals. Adults with mild to moderate mental retardation (n=48) living in a large southwestern city were interviewed. Vocational and social skills were rated as the most important, followed by personal, academic, and leisure skills, a ranking similar to that by significant others in the previous study. Implications for training community living skills were discussed.

REC # : 242

Lundstrom-Roche, F. (1982). Sex roles and mentally handicapped people. Mental Handicaps, 10(1), 29-30.

HANDICAPPING CONDITION:
MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Attitudes about careers, dating, and aspirations for marriage and family are explored.

ABSTRACT

This study explores the ideas of people with mental retardation about sex roles as well as hopes for marriage and children. The subjects in this survey saw themselves as men and women in their "ideal" life versus what actually happened in their day-to-day lives. They would like to have sex roles. This was expressed in their wishes for work outside the sheltered workshop as shop "girls" or fire"men." Their desire for sexuality was expressed in their wishes to be married, or to have heterosexual relationships.

REC # : 295

Mann, L., Davis, C., Bayer, C., Metz. C., & Wolford, B. (1983). LD or not LD, that was the question: A retrospective analysis of child service demonstration centers' compliance with the federal definition of learning disabilities. Journal of Learning Disabilities, 16(1), 14-17.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
History of CSDC's evaluation of compliance to federal definition of learning disabilities

ABSTRACT

A retrospective analysis of the Child Service Demonstration Centers' (CSDC) compliance with the federal definition of learning disabilities was conducted. The results of the analysis indicate that the CSDC did not abide, overall, with the federal definition of learning disabilities in their diagnoses. However, this finding should come as no surprise since there exists little consensus on a clear definition of learning disabilities.

REC # : 200

Martin, J. B., & Bowman, J. T. (1985). Predicting academic achievement of disabled college students. Journal of Rehabilitation, 51(2), 36-39.

HANDICAPPING CONDITION:
BLIND HI SED

PRIMARY FOCUS: EDUCATIONAL OUTCOME
The predictability of college grade point averages for persons with severe disabilities is examined.

ABSTRACT

This study sought to determine the relationship between college grade point average and the following selected predictor variables: high school grade point average, locus of control, severity of disability, and perception of the counseling relationship. Data were collected from a sample of 30 college students with severe disabilities and 30 students without disabilities from two southern universities and were analyzed by stepwize multiple regression analysis. The variables of high school grade point average and an interaction variable, composed of locus of control and severity of disability, accounted for 30% ($F = 12.73$, $p < .01$) of the variance in predicting college grade point average. One of the major conclusions was that the academic achievement of students who are externally controlled and severely disabled was not enhanced by a positively perceived counseling relationship.

REC # : 190

Martin, J. E., Rusch, F. R., & Heal, L. W. (1982). Teaching community survival skills to mentally retarded adults: A review and analysis. Journal of Special Education, 16(3), 243-267.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: travel training, money management, meal preparation, clothing and personal care, housekeeping, among others.

ABSTRACT

A revolution in providing residential alternatives for individuals with mental retardation (MR) has made in vivo training part of the deinstitutionalization process. The literature indicates that institutional teaching may not be as effective as community training. Adults with MR can acquire a variety of community survival skills -- the skills curriculum developers must address when they devise new and innovative community integration experiences. This paper reviews the training procedures and results of studies in 10 community survival skills: travel, money management, meal preparation, clothing and personal care, telephone use, housekeeping, self-medication, leisure, social skills and conversation. Several suggestions are made for future research into training citizens with MR for community living.

REC # : 247

Martin, J. E., Rusch, F. R., Tines, J. J., Brulle, A. R., & White, D. M. (1985). Work attendance in competitive employment: Comparison between employees who are nonhandicapped and those who are mentally retarded. Mental Retardation, 23(3), 142-147.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
The absenteeism of food service employees with mental retardation is compared to the absenteeism of those who are nonhandicapped employees over a period of three years.

ABSTRACT

Work attendance data for individuals who are mentally retarded and those who are nonhandicapped and employed as food service workers in a large midwestern university were examined over a three year period. No statistically significant differences were found between the workers who are mentally retarded and their nonhandicapped peers across the variables of unexcused absences, excused absences, and sick leave. The nonhandicapped employees were found to work a significantly greater amount of overtime than employees who are mentally retarded and also took significantly more vacations. Differences in terms of financial costs to employers are discussed with a view toward identifying implications for training individuals who are mentally retarded.

REC # : 181

Mathews, R. M. (1984). Teaching employment interview skills to unemployed adults. Journal of Employment Counseling, 21, 156-161.

HANDICAPPING CONDITION:
ORTHO

PRIMARY FOCUS: EMPLOYMENT OUTCOME
The effects of a behaviorally based textbook on employment interview skills of disabled adults was evaluated.

ABSTRACT

This study evaluates the effects of a behaviorally based textbook on the performance of employment interview skills by unemployed adults with work-related disabilities. The effects of the training procedures on the performance of employment interview skills were analyzed using a multiple-baseline design across participants. The percentage of occurrence of employment interview target behaviors was markedly higher after training than before for each of the participants. The book is designed to teach job seekers the skills needed to locate and obtain employment.

REC # : 196

Mathews, R. M., Damron, W. S., & Yuen, C. (1985).
A seminar in job-finding skills. Journal of Employment Counseling, 22, 170-173.

HANDICAPPING CONDITION:
NONE SPECIFIED

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Evaluation of a seminar in job-finding skills.

ABSTRACT

This article provides a description of a seminar designed to teach job-finding skills to senior agriculture students through the use of a behaviorally based textbook (learning job-finding skills, interviews), practice in job-seeking skills, and corrective performance feedback. Comparisons of student competencies in job-finding skills showed that post-training performance levels were higher than pre-training levels. Thus the seminar was an effective approach to helping graduates locate and obtain employment.

REC # : 197

Mathews, R. M., Whang, P. L., & Fawcett, S. B. (1981). Behavioral assessment of job-related skills. Journal of Employment Counseling, 18, 3-11.

HANDICAPPING CONDITION:
DIS

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Assessment tools were used to test job-related skills of 25 employed and 25 unemployed individuals.

ABSTRACT

An important aspect of finding and retaining employment is a person's level of occupational skills. Little information, however, is currently available on the comparative levels of job related skills among both unemployed and successfully employed adults. Using direct observation techniques, this study analyzes the occupational skills of these two groups. The results show that employed adults performed significantly better when unemployed adults on each of the 13 job-related skills assessed. These differences were found on both the job-finding and job-retention skills. These assessment methods may be useful to employment counselors interested in helping their clients find and retain satisfactory employment.

REC # : 192

McCarron, L. T., & Ludlow, G. C. (1981). Sensori-neural deafness and neuromuscular dysfunctions: Considerations for vocational evaluation and job placement. Journal of Rehabilitation, 47(1), 59-63.

HANDICAPPING CONDITION:
MULTI DEAF

PRIMARY FOCUS: EMPLOYMENT OUTCOME
The article discusses the importance of considering "secondary" dysfunctions which may accompany sensorineural deafness when vocational assessment is being done.

ABSTRACT

Viral disease is a common cause of sensorineural deafness. Damage may also be sustained to the vestibular system of the ear, which maintains equilibrium and regulates eye movement, and to the cerebellum which coordinates movement. Specific neuromuscular dysfunctions which accompany sensorineural deafness were observed for a representative group of 50 adolescents. The bimodal distribution of scores indicated severe problems in balance and nystagmus for 46% of the cases, while 52% had normal balance and normal eye movements. Severe cerebral functioning deficits were also observed for 36% of the cases, while 46% had normal coordination. Their research findings suggest the importance of conducting a comprehensive vocational evaluation which contains measures of essential sensor-motor skills. Many persons with developmental disabilities appear to have multiple handicapping conditions, including sensorimotor dysfunctions and the associated "secondary" dysfunctions which may have a substantive influence on vocational placement and outcome.

REC # : 183

McDonnel, J., Wilcox, B., & Boles, S. M. (1986). Do we know enough to plan for transition? A national survey of state agencies responsible for services to persons with severe handicaps. Journal for the Association for the Severely Handicapped, 11(1), 53-60.

HANDICAPPING CONDITION:
MR_SP MR_MO

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: vocational alternatives, competitive employment services, size of waiting lists, and projected increases in services.

ABSTRACT

Transition for students with severe handicaps from school to community life has become a principal concern for parents, advocates, and professionals. The failure of students with disabilities to access appropriate vocational and residential services after exiting school has highlighted the need for comprehensive transition planning at both an individual and systems level. Through interviews with state administrators of educational, vocational, and residential services, this study attempted to define the scope of post-service needs of individuals exiting public school programs on a national level. The results of the survey are discussed in terms of the implications for state agencies in effectively planning the transition of students with severe handicaps from school to post-school services.

REC # : 267

Messerly, C. (1986). The use of computer assisted instruction in facilitating the aquisition of math skills with hearing-impaired high school students. The Volta Review, 88(2), 67-77.

HANDICAPPING CONDITION:
DEAF

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Improvements in math scores by students with hearing disabilities were reported.

ABSTRACT

Stanford Achievement Tests were used as pre-and post-tests to measure growth in math skills for two groups of students with hearing impairments using computer-assisted instruction in their contained math classes. For Group 1 (operating at grade level) the post-test scores are significantly higher for application ($p < .05$); for Group 2 (operating below grade level), the post-test scores are significantly higher for application ($p < .05$). Half of the grade equivalent scores for both groups show a 6-month or more gain duration of this study. The results on the different sections of the Stanford Achievement Tests and the possible reasons behind them are discussed.

REC # : 293

Miller, J. H., Mulkey, S. W., & Kopp, K. H. (1984). Public rehabilitation services for individuals with specific learning disabilities. Journal of Rehabilitation, 50(2), 19-29.

HANDICAPPING CONDITION:
SI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
A descriptive analysis of programs offered by vocational rehabilitation agencies for individuals with specific learning disabilities.

ABSTRACT

Specific Learning Disabilities (SLD) is the newest disability category being served by the state-federal vocational rehabilitation program. This report summarizes the results of a national survey conducted with the state vocational rehabilitation agencies (general) concerning policy and procedures, statistical (R-300) data, staff development, and direct client services. Findings indicate that despite the relatively small number of persons with SLD currently being served, the agencies are making notable preparations for the provision of high quality services to the anticipated increase in SLD referrals.

REC # : 188

Minskoff, E. H., Sautter, S. W., Hoffmann, F. J., & Hawks, R. (1987). Employer attitudes toward hiring the learning disabled. Journal of Learning Disabilities, 20, 53-57.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
This study examines the acceptance of persons with learning disabilities by their employers.

ABSTRACT

To determine attitudes about employing workers with learning disabilities, 326 employers from six states were surveyed about their attitudes toward hiring the handicapped in general and the learning disabled in particular. The employers expressed positive attitudes toward making special allowances for handicapped workers as long as such allowances did not involve reduced workloads or involvement in the worker's personal life. Less positive attitudes were expressed toward hiring the learning disabled. Only one-half of the employers stated that they would hire workers with learning disabilities. These negative attitudes did not seem to be related to lack of knowledge about learning disabilities, but rather seemed to relate to prejudice against workers with learning disabilities or lack of experience in supervising such workers.

REC # : 215

Nichols, J. L. (1982). Standards and accreditation in independent living. Lawrence, KS: The Research and Training Center on Independent Living, University of Kansas.

HANDICAPPING CONDITION:
DIS BLIND MULTI VISU HI ORTHO DEAF SED MR_SP MR_MO MR_MI SI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The paper presents alternatives for establishing standards and accreditation for independent living programs.

ABSTRACT

The author argues that the field of independent living needs to develop a standards and accreditation mechanism for its programs so that accountability can be demonstrated when demanded by government. The paper presents alternatives for establishing standards and accreditation for independent programs and makes a case or using The Commission on Accreditation of Rehabilitation Facilities as the standards and accreditation mechanism for Independent Living Programs.

REC # : 203

Nisbit, J., & Vincent, L. (1986). The differences in inappropriate behavior and instructional interactions in sheltered and nonsheltered work environments. Journal of the Association for the Severely Handicapped, 19-27.

HANDICAPPING CONDITION:
MULTI VISU HI MR_SP MR_MO MR_MI SI LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Frequency of inappropriate behaviors in sheltered and nonsheltered work environments was examined.

ABSTRACT

The purpose of this study was to examine and compare the nature and frequency of the instructional interactions and work-related behavior of 15 workers in nonsheltered vocational environments to 15 workers in sheltered environments. Workers in nonsheltered and sheltered environments were observed using a discontinuous time sampling procedure for approximately three 1-hour sessions. Data were collected during work and break times on instructional interactions between the workers with disabilities and their co-workers and supervisors. Additionally, data were collected on the frequency of eight categories of behavior labeled as inappropriate by observers. The results revealed that the workers in nonsheltered environments engaged in significantly more instructional interactions with supervisors and exhibited significantly fewer occurrences of inappropriate behavior.

REC # : 232

Okolo, C. M., & Silington, P. (1986). The role of special education in LD adolescents' transition from school to work. Learning Disabilities Quarterly, 9, 141-155.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Amended practice recommendations include: occupational awareness, explorational, basic work experience, in depth career and vocational assessment, instruction in job-related academic and interpersonal skills, and postschool placement and follow-up.

ABSTRACT

Despite increasing interest in the transition of youth with handicaps from school to post-secondary training and employment, available data indicate that few secondary-school special education programs provide relevant services. This article gives a rationale for and a delineation of the types of services which can facilitate the transition process for adolescents with learning disabilities. First, the authors review recent studies of LD individuals' vocational adjustment and identify the skills needed for successful transition to the world of work. Current practices in secondary special education and vocational education are then discussed. The authors conclude that secondary special education programs should provide six types of vocationally relevant activities: (a) occupational awareness, (b) in depth career/vocational assessment, (c)instruction in job-related academic skills, (d) instruction in job-related interpersonal skills, (e) support services to other disciplines involved in vocational programming, and (f) post-school placement and follow-up. Finally, recommendations for personal preparation and future research are suggested.

REC # : 229

Parmenter, T. (1988). The development of a quality of life model as an outcome measure of rehabilitation programs for people with developmental disabilities. Paper presented at the 9th Annual Conference of the Young Adult Institute, New York.

HANDICAPPING CONDITION:
MULTI ORTHO

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: income, type of employment, transportation, knowledge of self, living arrangements, family relations, and leisure activities.

ABSTRACT

Within the framework of sociological symbolic interactionist theory it is argued that a person's quality of life is best assessed on the basis of his/her behavior in which the behavior occurs. Using this theoretical base, a quality of life model is presented consisting of three interacting sets of variables; functional behaviors, the self and societal influences. Data are presented from a pilot study of thirty-two people with a variety of developmental disabilities who have participated in a community living program. Structured interviews to assess aspects of their quality of life within the framework of the model were conducted. It is suggested that the results of the study support the multidimensional nature of a person's quality of life which include aspects such as satisfaction, social and interpersonal relationships, activity patterns, degree of self-determination, socio-economic factors and physical and psychological access to community services.

REC # : 224

Pueschel, S. M., & Scola, P. S. (1988). Parents' perceptions of social and sexual functions in adolescents with Down's syndrome. Journal of Mental Deficiency Research Research, 32, 215-220.

HANDICAPPING CONDITION:
MR_MI MO_MO

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: social activities and aspirations for marriage.

ABSTRACT

The authors investigated parental perceptions of social interactions, interest in the opposite sex, sexual functions and issues concerning sex education in young persons with Down's syndrome. The evaluation of the data revealed that more than half the study population showed interest in the opposite sex and are attending social gatherings. Many of the youngsters had expressed a desire to get married; however, only a few had an interest in sexual relationships. Masturbation was observed in 40% of the young men and in 22% of the young women. About half of the parents feel that their children should be sterilized or should have other forms of birth control if they would be able to reproduce. Only a limited number of adolescents had sex education. More parents who have girls with Down's syndrome than those who have boys are worried that their child may be taken advantage of sexually.

REC # 257

Raimondo, D., & Maxwell, M. (1987). The modes of communication used in junior and senior high school classrooms by hearing impaired students and their teachers and peers. The Volta Review, 89(6), 263-275.

HANDICAPPING CONDITION:
DEAF

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Communication methods of students with hearing impairments are examined.

ABSTRACT

This article describes the results of qualitative analyses of communication modes used by 20 hearing-impaired students, their teachers, and their peers in mainstream junior and senior high school classrooms in Texas. In general, speech was used most often by all three groups of individuals studied. Pantomime and gesture, writing, sign language, finger spelling, and interpreters were used with considerably less frequency. While the all-hearing-impaired pairs or groups of interactors employed speech most of the time, they also took advantage of other modes of communication more often often than the mixed hearing impaired and normal hearing interactors. These findings validate data previously collected using a questionnaire sent to a similar sample of subjects, thus providing a measure of reliability for using questionnaires with this population. Qualitatively, while the hearing-impaired students in this study were definitely speech oriented, they demonstrated only minimal self-initiated interpersonal interaction with normal hearing teachers and peers, communicating more often with their hearing impaired peers when they were available.

REC # : 282

Reid, G. M. (1978). A comparative analysis of selected characteristics of mildly mentally retarded adolescents and their subsequent adult status. University of Minnesota. (University Microfilms International No 79-06,368)

HANDICAPPING CONDITION:
MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: present living circumstances, financial circumstances, social/living arrangements, transportation, leisure time activities, and marital status.

ABSTRACT

This research effort was designed to identity which statistical or clinical predictive variables, as determined 15 years earlier when the original 183 subjects were ninth graders in a midwestern metropolitan public school, distinguished among persons with mild retardation on seven specific indications of adult status. Out of this group, 83 were located and interviewed for the follow-up study. These individuals were evaluated on three criteria: occupational level, salary bracket, and present living quarters. The first two criteria were calculated for three time periods: CA 18-22, CA 22-29, and time contact CA 30. Present living quarters was a variable for the third period of contact (CA 30) only. The follow-up study found that the 30-year-olds were generally self-sufficient persons who functioned in normal social arrangements.

REC # : 176

Rodin, E. A., Shapiro, H. L., & Lennox, K. (1977). Epilepsy and life performance. Rehabilitation Literature, 38(2), 34-39.

HANDICAPPING CONDITION:
HI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The variables compared between the two subgroups include: occupation, social isolation, and degree of work impairment.

ABSTRACT

The usual classifications of patients with epileptic seizures have no direct relevance for the life performance of the individual. Patients were therefore classified into two groups: those with seizures only and those who had other associated handicaps. Statistical tests on a wide variety of variables showed that patients in the "epilepsy only" group were very little handicapped by their illness and functioned well on the job and in school. It was the larger group with associated handicaps who had impaired functioning in society. By blaming seizures for their failure in life rather than their associated problems, these patients tend to perpetuate the stigma against the illness.

REC # : 179

Rusch, F., & Hughes, C. (in press). Supported employment: Promoting employee independence. Mental Retardation.

HANDICAPPING CONDITION:
NONE SPECIFIED

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: supported employment, self-instruction, self-monitoring, and self-reinforcement.

ABSTRACT

This article introduces a process that employment specialists may use with supported employment to promote the independent performance of target employees. Four strategies are described that include: (a) evaluating employee independence on the job, (b) teaching employee adaptability, (c) facilitating assistance by co-workers, and (d) transferring control of employee independence to work-related stimuli. The process is based upon emerging research that indicates that target employees can become active participants in promoting their own independent performance.

REC # : 252

Sabornie, E. J., & Kauffman, J. M. (1987). Assigned, received, and reciprocal social status of adolescents with and without mild mental retardation. Education and Training in Mental Retardation, 22(3), 139-149

HANDICAPPING CONDITION:
MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Ideas about specific individuals' social status as described by adolescents with and without mental retardation.

ABSTRACT

Sociometric ratings assigned by and to high school youths with and without mental retardation, who attended regular classes for portions of the school day, were matched with an equal number of nonhandicapped (NH) students in five schools. The Ohio Social Acceptance Scale was administered in 18 physical education classes enrolling students with mental retardation. Results indicated the subjects with mental retardation, in comparison to matched NH students, rated their peers more negatively and received more negative classroom ratings. Moreover, the matched subjects did not differ in assigned or received high acceptance and mild rejection. In general, however, the comparison groups differed considerably in many aspects of assigned, received, and reciprocal social status. The findings are discussed with regard to the need for examining the social dynamics of integrated classrooms in a comprehensive fashion.

REC # : 249

Salend, S. J., & Fradd, S. (1986). Nationwide availability of services for limited English proficient handicapped students. The Journal of Special Education, 20(1), 127-135.

HANDICAPPING CONDITION:
MULTI SED MR_SP MR_MO MR_MI SI LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Educational variables include: Recommended assessment instruments, language dominance and proficiency, curriculum for bilingual handicapped, among others.

ABSTRACT :

The 50 states and the District of Columbia were surveyed concerning their procedures for delivering educational services to limited English-proficient (LEP) handicapped students. Results indicated that few states have established procedures and guidelines for delivering educational services to their LEP handicapped students. Suggestions for developing and delivering educational services to LEP handicapped students are presented.

REC # : 245

Salend, S. J., & Geik, K. A. (1988). Independent living arrangements for individuals with mental retardation: The landlords' perspective. Mental Retardation, 26(2), 89-92.

HANDICAPPING CONDITION:
MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: information or assistance received by the landlord, types of problems encountered, and would they rent to individuals with mental retardation again.

ABSTRACT

Twenty-five landlords were interviewed to examine their perspectives about independent living arrangements for persons with mental retardation. Results indicated that a significant number of landlords experienced some problems in renting to such individuals. Guidelines for promoting the success of living arrangements for persons with mental retardation based on the landlords' experiences were discussed.

REC # : 275

Saur, R., Coggiola, D., Long, G., & Simonson, J. (1986). Educational maninstreaming and the career development of hearing-impaired students: A longitudinal analysis. The Volta Review, 80, 79-89.

HANDICAPPING CONDITION:
DEAF

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: income, job satisfaction, and on-the-job communication.

ABSTRACT

This study tests a model of the relationship between educational mainstreaming and the achievement of hearing-impaired students. Variables included represent student background, achievement, placement, and later employment. The hearing-impaired subjects in the study had differing amounts of exposure to mainstreaming in high school and college. Evaluation using path analysis indicates that the model adequately represents the relationships in the data. Degree of hearing loss showed no significant relationship to the other variables and so was dropped from the model. The article explores the implications of the model for the educational mainstreaming of handicapped students in general.

REC # : 264

Saur, R., Popp-Stone, M. J., & Hurley-Lawrence, E. (1987). The classroom participation of mainstreamed hearing-impaired college students. The Volta Review, 89(6), 277-286.

HANDICAPPING CONDITION:
DEAF

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Educational variables include: classroom participation, requests for clarification, questioning, and initiates discussion.

ABSTRACT

The research reported in this article was designed to look at one important aspect of the experience of mainstreamed students with hearing impairments during classroom participation. Subjects were students from the National Technical Institute for the Deaf who were cross registered or mainstreamed into other colleges of the Rochester Institute of Technology along with a sample of their normal-hearing classmates. The article examines the relationship between participation and other variables representing student background, communication characteristics, and academic progress. Comparisons are also made between students with hearing impairments and students with normal hearing. It is concluded that the relative degree of hearing loss per se is not related to students with hearing impairments participation. However, as a group these students participate significantly less frequently than their peers without handicaps.

REC # : 274

Schalock, R. L. (1986b). Defining and measuring the quality of work and outside life. Paper presented at the Annual TASH Conference, San Francisco, CA.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include frequency of social life and level of independence.

ABSTRACT

The paper presents the rationale for the development of a quality of life questionnaire. Its main aims are to describe the previous conceptualization of Quality of Life, distinguishing between those that use subjective perceptions and those that rely on social indicators and observable behaviors. The quality of life questionnaire was developed for use with persons who are developmentally disabled; it measures both social interaction and work life factors.

REC # : 218

Schalock, R. L., Wolzen, B., Ross, I., Elliott, B., Werbel, G., & Peterson, K. (1986). Post-secondary community placement of handicapped students: A five-year follow-up. Learning Disability Quarterly, 9, 295-303.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
This article assesses the community adjustment of persons who graduated from a five-year community training program.

ABSTRACT

This article presents the results of an evaluation of the employment and living status of 108 individuals with moderate to severe handicaps who had graduated during a five-year period (1979-1983) from rural schools employing a community-based job exploration and training model. Nineteen predictor variables including student characteristics, school variables, and county characteristics were statistically related to nine employment-related outcome variables. The results showed that (a) 61% of the graduates were working competitively; (b) 22% were living independently; (c) the student with specific learning disabilities was more likely to be employed, live independently, and be self-sufficient than the educable mentally handicapped or the student with mental retardation; (d) students whose families were moderately to highly involved with the students' programs were more successful on the employment-related outcome variables; and (e) significant predictors included both student characteristics and environmental variables. Implications are discussed relative to the current emphasis on post-graduation job placement, program accountability, training in the natural environment and support systems.

REC # : 219

Schleien, S. J., & Larson, A. (1986). Adult leisure education for the independent use of a community recreation center. Journal of the Association for the Severely Handicapped, 11(1), 39-44.

HANDICAPPING CONDITION:
MR_SP

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include acquiring skills needed to travel to and utilize a community recreation center.

ABSTRACT

The purpose of this study was to implement and evaluate a leisure education training program designed to teach the complete and functional use of a community recreation center to two adults with severe mental retardation. Since these individuals resided at a group home in close proximity to the recreation center, this recreation program was deemed socially valid by group home and park board staff. A community recreation center was utilized in this program as the training setting.

Within a multiple baseline design across three recreational activities involving the recreation center, the participants acquired the skills necessary to access and use the recreational facility without the presence of the care provider. Results demonstrated that individuals with severe mental retardation could (a) acquire age-appropriate leisure skills to use a neighborhood center independently ; (b) access a neighborhood recreation center in the absence of the residential care provider; and (c) partially, but effectively, interact with agency staff concerning personnel preferences of recreational activities.

REC # : 231

Schloss, P. J., Wolf, C. W., & Schloss C. N. (1987). Financial implications of half- and full-time employment for persons with disabilities. Exceptional Children, 54(3), 272-276.

HANDICAPPING CONDITION:
NONE SPECIFIED

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include income, number of hours employed, and benefits.

ABSTRACT

Increased financial well-being is often assumed to be a benefit of full-time employment for individuals with handicaps. However, there is some evidence that this is not true. In this study a balance sheet approach was utilized to examine the financial implications of part-time and full-time employment for persons with handicaps. Balance sheets (income versus expenses) were developed for three income levels: no earned income, income from a part-time (20 hours week) job, and income from a full-time (40 hours a week) job. The results indicated that net disposable income was comparable for individuals working part time when compared to individuals working full time. In either case, the net disposable income is no more than $3,000 over the net disposable income of an unemployed person. This provides evidence that there is an absence of financial incentives for full-time employment and suggests that persons with disabilities should carefully consider the financial effects of potential full-time employment.

REC # : 262

Schmitt, P., Growick, B., & Klein, M. (in press). Transition from school to work for individuals with learning disabilities: A comprehensive model. In Rubin & Rubin (Eds.), Contemporary Challenges to the Rehabilitation Counseling Profession.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: vocational testing, vocational exploration, skills training, and supported job search/placement/follow-up.

ABSTRACT

This article proposes a comprehensive model for easing the transition from school to work for individuals with learning disabilities. Six steps are cited as being vital to the transition process: (1) the development of an individualized transition plan, (2) learning styles identification, (3) vocational exploration and career education, (4) employability skills training, (5) supported job search, placement, and follow-up, and (6) parent and agency cooperation and involvement. A lengthy case study of one individual who followed the proposed model is also included.

REC # : 258

Shafer, M., Hill, J., Seyfarth, J., & Wehman, P. (1987). Competitive employment and workers with mental retardation: Analysis of employer's perceptions and experiences. American Journal of Mental Retardation, 92(3), 304-311.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Reasons for employment, use of employment incentives, as well as evaluation of on-the-job performance were evaluated.

ABSTRACT

The results of a survey of three groups of employers (employers of workers with mental retardation who received (a) supported competitive employment services; (b) only job placement services, or (c) no known services) in Virginia were reported. Employers were generally satisfied with the performance of workers with mental retardation, but they were more satisfied with the performance of those who were receiving supported competitive employment services.

REC # : 235

Shannon, E., & Reich, N. (1979). Clothing and related needs of physically handicapped persons. Rehabilitation Literature, 40(1), 2-6.

HANDICAPPING CONDITION:
MULTI VISU HI ORTHO

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables: preferences in clothing design, fabric selection, closure type, and problems with readymade garments.

ABSTRACT

A recent survey of the physically handicapped population of Arizona was made as part of the University of Arizona research project titled, "Information Systems for the Clothing and Daily Living Needs of the Handicapped." An attempt was made to categorize the common physical limitations from the various disabilities and to identify the types and kinds of information physically disabled persons require regarding their clothing and daily living activities. The main objective of the survey was to collect data useful for describing and clearly explaining the needs of this special group to manufacturers, educators, retailers, professionals, and paraprofessionals.

REC # : 289

Skrtic, T. M., Summers, J. A., Brotherson, M. J., & Turnbull, A. P. (1984). Sibling relationships in families with handicapped children. In J. Balcher-Dixon (Ed.), Young severely handicapped and their families: Research in review (pp. 1-53). Lawrence, KS: Academic Press.

HANDICAPPING CONDITION:
DIS BLIND MULTI VISU HI ORTHO DEAF SED MR_SP MR_MO MR_MI SI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
This paper has to do with the internal dynamics of families with handicapped children, especially the relationships between siblings.

ABSTRACT

This chapter represents an attempt to integrate the research literature on the relationships of children with severe handicaps and their siblings within an overall conceptual framework that recognizes the family as a system, inclusive of the sibling subsystem. The approach to integration applied here acknowledges siblings as an integral part of the family system. In turn, the conceptual framework views the family in terms of the functions it performs, its structural characteristics, and its stage or cycle of development. Using this conceptualization of the family system as a tool, the utility of current research on sibling relationships is addressed and an agenda for future research is suggested.

REC # : 209

Smith, M. D., & Belcher, R. (1985). Teaching life skills to adults disabled by autism. Journal of Autism and Developmental Disordering, 15(2), 163-175.

HANDICAPPING CONDITION:
SED

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
This study applied a model for task analyzing skills and implementation according to scheduled opportunities for assistance to adults disabled by autism.

ABSTRACT

The acquisition of life skills is a high priority for adults disabled by autism who are living in community based residential programs. A training program was implemented and evaluated that consisted of analyzing life skills into component steps and providing increasing levels of assistance according to a predetermined schedule. Five adults who were severely disabled by autism and who lived in group homes in the community served as participants. All five adults showed progress in targeted life skills, and four of the five achieved independence on their targeted skills. The usefulness of this training model in community-based residential programs is discussed.

REC # : 184

Spooner, F., Algozzine, B., & Saxon, J. P. (1980). The efficacy of vocational rehabilitation with mentally ill persons. Journal of Rehabilitation, 46(4), 62-66.

HANDICAPPING CONDITION:
SED

PRIMARY FOCUS: EMPLOYMENT OUTCOME
The efficacy of vocational rehabilitation of mentally ill persons was explored.

ABSTRACT

The efficacy of vocational rehabilitation of mentally ill persons (e.g., psychotic) was explored; previous investigations of this population appear not to agree on which methods are the best for rehabilitating them. For the purposes of this paper, three different rehabilitation methods (community rehabilitation unit, operant technology, and medication regimes) were examined for their vocational rehabilitative value. It was concluded from a review of the literature that vocational rehabilitation plans using operant technology and medication regimes are at present two of the most effective methods for the vocational rehabilitation of mentally ill individuals. Not all investigators had positive results from the other two methods of vocational rehabilitation (i.e., in the community and on grounds). Investigators using operant technology and medication regimes, however, have reported success in most instances.

REC # : 194

Storey, K., Bates, P., & Hanson, H. B. (1984). Acquisition and generalization of coffee purchase skills by adults with severe disabilities. *Journal of the Association for the Severely Handicapped*, *9*(3), 178-195.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent Living variables include the acquisition and maintenance of coffee purchasing skills.

ABSTRACT

Six adults with severe disabilities were taught to purchase coffee in a community sit-down restaurant. Skills in the community were taught using a 46-step task analysis, a prompt hierarchy of least to greatest prompts, and social reinforcement Generalization was assessed across two restaurants with similar characteristics and one with dissimilar characteristics (a fast food restaurant). At the completion of training, the people involved in the study demonstrated competencies equal to non-handicapped customers and they maintained these skills at a two- to five-month follow-up assessment.

REC # : 222

Storey, K., & Gaylord-Ross, R. (1987). Increasing positive social interactions by handicapped individuals during a recreational activity using a multicomponent treatment package. Research in Developmental Disabilities, 8, 627-649.

HANDICAPPING CONDITION:
MULTI VISU HI ORTHO DEAF SED MR_SP MR_MO MR_MI SI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: role playing, graphic feedback, contingent reinforcement, and self-monitoring.

ABSTRACT

A multi-component treatment package increased the rate of positive statements among handicapped youth during a social and leisure activity at a work training setting. The package of role playing, graphic feedback, contingent reinforcement, and self-monitoring was directly replicated across three experiments in producing normative rates of positive verbal statements. There was no evidence of generalization to other stimulus activities. There was limited response generalization to a class of negative verbal statements. The study further examined the critical components of the maintenance package through a withdrawal design. It was found that contingent reinforcement and self-monitoring could maintain substantial rates of positive behaviors. In the third experiment it was further demonstrated that self-monitoring alone could maintain positive statements in three of the four students in the group.

REC # : 244

Turnbull, A. P., Brotherson, M. J., & Summers, J. A. (1985). The impact of deinstitutionalization on families. In R. H. Bruininks & K. C. Lakin (Eds.), Living and learning in the least restrictive environment (pp. 115-140.). Baltimore, MD: Paul H. Brookes.

HANDICAPPING CONDITION:
ORTHO MR_SP MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Presents a family systems model within which the impact of deinstitutionalization on families can be analyzed and further directions generated.

ABSTRACT

This chapter presents the current formulation of a family systems model within which the impact of deinstitutionalization on families can be analyzed and future directions generated. This model is in the process of development at the Research and Training Center on Independent Living at the University of Kansas, Lawrence. The development of the model involves a two-tier approach: (1) a comprehensive review of the literature on families with handicapped children and the literature from related disciplines on family systems theory, and (2) intensive interviews with 12 family units (six with mentally retarded members and six with physically handicapped members) using a naturalistic inquiry paradigm. A future phase of this research will be the development of family assessment tools based on the family systems model that can be used to identify and place in order of priority the intervention needs of individual families.

REC # : 201

Turnbull, A. P., Summers, J. A., & Brotherson, M. J. (1983). Family life cycle: Theoretical and empirical implications and future directions for families with mentally retarded members. Lawrence, KS: The Research and Training Center on Independent Living, University of Kansas.

HANDICAPPING CONDITION:
MR_SP MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The problems facing families with a member who is mentally retarded are discussed with regard to: developmental stages, transition, family functions, coping strategies, and family interaction.

ABSTRACT

This paper evaluated many independent studies and derived conclusions about which areas of family life cycle need further investigation. These include: 1) the need for intervention, (2) the need for studies dealing with the positive and negative impact of persons with mental retardation on the family's ability to carry out functions, (3) investigating the intended and unintended consequences of the parent-as-teacher role, and (4) the teaching of coping strategies to the families so they may adjust to changes constructively. The need for collaboration is strongly emphasized.

REC # : 180

Venn, J., & Walder, F. (1988). Deaf blind independent living project: A status report. Education of the Visually Handicapped, 20(1), 23-28.

HANDICAPPING CONDITION:
BLIND

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: home management, personal management, social skills, and vocational skills.

ABSTRACT

This paper describes the Independent Living Project for the Deaf-Blind Youth at the Florida School for the Deaf and the Blind. The project provided a learning environment that emphasized independence. The curriculum focused on functional daily living and vocational skills. One of the unique aspects was the utilization of a video system to replace direct staff supervision. All of the students in the project made progress in developing independence. They have graduated and most have made a successful transition in to adult living and work. These results support the effectiveness of this model in educating deaf-blind teen-agers.

REC # : 279

Vogel, S. A. (1982). On developing LD college programs. Journal of Learning Disabilities, 15(9), 518-528.

HANDICAPPING CONDITION:
LD

PRIMARY FOCUS: EDUCATIONAL OUTCOME
Education variables include: assessment, academic advising, improving study habits and written language skills, as well as compensatory strategies.

ABSTRACT

This article explores the development of college programs for students with learning disabilities. Areas discussed include: assessment, academic advising, developing of effective study habits, improving written language skills. Compensatory strategies are also included. The need for interrelation and communication between special services staff and regular academic staff is also stressed.

REC # : 285

Vogelsberg, R. T., & Rusch, F. (1979). Training severely handicapped students to cross partially controlled intersections. AAESPH Review, 4(3), 264-273.

HANDICAPPING CONDITION:
MULTI MR_SP

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Independent living variables include: pre-instruction, instructional feedback, and selective practice.

ABSTRACT

In this study three severely handicapped school-aged students were trained to cross the street. The students were provided pre-instruction, instructional feedback and selected repeated practice to acquire the skills to cross the street at partially controlled intersections (selective repeated practice was introduced only when physical assistance was required on those skills students found particularly difficult to learn); a rehearsal and model phase was eventually used to promote independent street crossing. Generalization probes on untreated, partially controlled intersections suggested that each student used the newly acquired behaviors appropriately. Future research is suggested in the areas of training two-behavior versus four-behavior chains, using repeated practice to facilitate acquisition and teach independent decision making to severely handicapped students.

REC # : 283

Wacker, D. P., Berg, W. K., Visser, M. B., Egan, J. E., Berrie, P., Ehler, C., & Short, B. (1986). A preliminary evaluation of independence in a competitive employment setting. The Journal of the Association for Persons with Severe Handicaps, 11(4), 246-254.

HANDICAPPING CONDITION:
MR_SP MR_MO

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Independence of two handicapped students in a competitive employment setting was evaluated.

ABSTRACT

Two students received three months of training at a community job site where they received minimum wage for performing clerical tasks (e.g. photocopying and mail sorting). In addition to documenting the students' improved performance on the job tasks, the students' independent demonstration of incidental behaviors was also evaluated within a case study design. Incidental behaviors were defined as any behavior that might increase independence in a job setting, but which did not receive direct instruction from staff. The results indicated that both students demonstrated increased independence in the work setting based on three qualitatively different measures of their incidental behavior. First, both students demonstrated substantial increases in their number of appropriate incidental behaviors across work days, suggesting that they were beginning to interact more appropriately with the work environment. Second, both demonstrated over 20 new incidental behaviors, suggesting that experience in the work environment resulted in collateral changes in behavior. Third, both students demonstrated a higher ratio of appropriate versus inappropriate behavior over time. The potential benefits of documenting incidental behaviors are discussed, as are limitations with the current approach.

REC # : 207

Walls, R. T., Crist, K., Sienicki, A., & Grant, L. (1981). Prompting sequences in teaching independent living skills. Mental Retardation, 19(5), 242-245.

HANDICAPPING CONDITION:
MR_MO MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Three tasks, folding a shirt, setting the table, and operating a tape recorder, were taught using prompting sequences.

ABSTRACT

The effects of three prompting sequences on the acquisition of independent living skills with mild and moderately mentally retarded vocational rehabilitation clients are examined. A least-to-most restrictive sequence and a within-mode physical guidance fading procedure were examined. Higher aptitude subjects made fewer errors, made a greater proportion of correct responses, and required less time to master the tasks. However, no differences were attributable to the prompting sequences.

REC # : 226

Watts, S. (1983). Women and disabilities: A life-cycle approach. Lawrence, KS: The Research and Training Center on Independent Living, University of Kansas.

HANDICAPPING CONDITION:
ORTHO

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Barriers to independent living of women with disabilities are discussed.

ABSTRACT

The purpose of this paper is to present a critical review of literature on adult development and the female life-cycle, as well as the literature on women with disabilities. By combining these two areas of research, a new approach to counseling, specifically a life-cycle approach to peer counseling wherein disability-related and life-cycle-related problems and their overlap are addressed. The development of programs is also discussed.

REC # : 202

Wehman, P., Hill, J., Wood, W., & Parent, W. (1987). A report on competitive employment histories of persons labeled severely mentally retarded. The Journal of the Association for the Severely Handicapped, 12(1), 11-17.

HANDICAPPING CONDITION:
MR_SP

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include unsubsidized wages, type of employment, and amount of vocational intervention after individual has been placed.

ABSTRACT

The purpose of this article is to describe the competitive employment experiences of 21 persons labeled severely mentally retarded. Over an eight-year period from 1978 to 1986, 21 persons with measured intelligence levels under 40 were competitively employed with ongoing or intermittent job site support. A cumulative total of over $230,000 of unsubsidized wages was earned. Significant vocational problems included slow work rate and lack of appropriate social skills. The majority of the persons worked in part-time, entry-level service positions. The major suggestions for improving the quality of vocational interventions included (a) more creative and comprehensive job development, and (b) more powerful systematic instructional techniques. It was concluded that while this report extends the concerns of competitive employment literature to persons with more severe intellectual handicaps, much more innovative work needs to be performed with individuals who exhibit profound disabilities.

REC # : 233

Welsh, W. Walter, G. G., & Riley, D. (1986). Earnings of deaf RIT graduates as reported by the Internal Revenue Service. Rochester, NY: National Technical Institute for the Deaf.

HANDICAPPING CONDITION:
DEAF

PRIMARY FOCUS: EMPLOYMENT OUTCOME
Employment variables include: annual wages and unemployment rates.

ABSTRACT

The National Technical Institute for the Deaf (NTID) contracted with the Internal Revenue Service (IRS) to provide the following 1982 tax year information: annual wages and salaries, percentage of graduates and withdrawals for the years of 1969-80. Five major conclusions were drawn: (1) degree level exerts a significant influence on wages and salaries, (2) female graduates earned significantly less than male graduates, (3) as graduates gain experience and maturity, their wages increase, but the rate of increase slows with the passage of time, (4) significant variability exists among programs in the areas of mean wages and in the percentage of reporting wages, and (5) earnings of deaf baccalaureate graduates are 93% of the earnings of hearing graduates.

REC # : 256

Williams, W., Fox, W., Christie, L., Thousand, J., Conn-Powers, M., & Carmichael, L. (1986). Community integration in Vermont. Journal of the Association for Persons with Severe Handicaps, 11(4), 294-299.

HANDICAPPING CONDITION:
DIS BLIND MULTI VISU HI ORTHO DEAF SED MR_SP MR_MO MR_MI SI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Development and implementation of a statewide interdisciplinary model for providing special education and community integration services to persons with severe handicaps.

ABSTRACT

The Center for Developmental Disabilities, a University Affiliated Facility Satellite at the University of Vermont, has had a major role in facilitating community integration throughout the state. This article describes the development and implementation of a statewide interdisciplinary model for providing special education to learners with severe disabilities and the Center's role in facilitating systems change in early special education, recreation and leisure opportunities, vocational services, and family support.

REC # : 211

Zetlin, A., & Mertaugh, M. (1988). Friendship patterns of mildly learning handicapped and nonhandicapped high school students. American Journal of Mental Retardation, 92(5), 447-454.

HANDICAPPING CONDITION:
MR_MI LD

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Peer group patterns were analyzed in students with and without handicaps.

ABSTRACT

Participant observation techniques were employed in a high school setting to document the friendship patterns of 32 students with mild handicaps and 32 students without learning handicaps. Three features of friendship were examined: intimacy, empathy, and stability over time. Adolescents with handicaps were found to have fewer friendships than did their counterparts without handicaps and less stable friendships. There was less evidence of intimacy and empathy between pairs of handicapped peers. Variation in friendship behavior within both populations was noted, and factors contributing to difficulties in achieving fuller friendship were discussed.

REC # : 236

Zetlin, A. G., & Turner, J. L. (1985). Transition from adolescence to adulthood: Perspectives of mentally retarded individuals and their families. Journal of Mental Deficiency, 89(6), 570-579.

HANDICAPPING CONDITION:
MR_MI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
The concerns of the adolescent with mental retardation include: parent-child relations, identity issues, problem behavior, sexuality issues, and adult adaption.

ABSTRACT

From ethnographic field notes and life history interviews, basic descriptive data were presented that depict the adolescent life stage as it was recounted by 25 individuals with mild mental retardation and their parents. Patterns of adolescent adjustment are described in terms of the issues and concerns that preoccupied the retarded adolescents, the problem behavior exhibited by these young persons, and what parents did about their children's problems. Comparison of adolescent adjustment patterns and current adult status revealed that the central concerns of adolescence remain problems for only some adults with mild mental retardation. The majority regard nominative achievements as most salient to their self-identity and well being.

REC # : 187

Zola, I. E. (1982). The evolution of the Boston Self-Help Center. Lawrence, KS: The Research and Training Center on Independent Living, University of Kansas.

HANDICAPPING CONDITION
HI

PRIMARY FOCUS: INDEPENDENT LIVING STATUS
Describes the evolution of a self-help group of disabled individuals whose goal was community integration.

ABSTRACT

This paper is an eyewitness account of the evolution of the Boston Self-Help Center devoted to the delivery of independent living services to disabled and other health impaired individuals. It provides a personal and professional reporting of the events leading up to and four years after the establishment of the Boston Self-Help Center.

REC # : 210

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Heal, L. W., & Fujiura, G. T. (1984). Methodological considerations in research on residential alternatives for developmentally disabled persons. In N. R. Ellis & N. W. Bray (Eds.), International review of research in mental retardation (pp. 205-244). Orlando: Academic Press Inc.

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APPENDIX A

Definitions of Handicapping Conditions

From P.L. 94-142:

(a) As used in this part, the term "handicapped children" means those children evaluated in accordance with 121a.530-121a.534 as being mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multihandicapped, or as having specific learning disabilities, who because of those impairments need special education and related services.

(b) The terms used in this definition are defined as follows:

(1) "Deaf" means a hearing impairment which is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, which adversely affects educational performance.

(2) "Deaf-blind" means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational problems that they cannot be accommodated in special education programs solely for deaf or blind children.

(3)"Hard of hearing" means a hearing impairment, whether permanent or fluctuating, which adversely affects a child's educational performance but which is not included under the definition of "deaf" in this section.

(4) "Mentally retarded" means significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance.

(5) "Multihandicapped" means concomitant impairments (such as mentally retarded-blind, mentally retarded-orthopedically impaired, etc.), the combination of which causes such severe educational problems that they cannot be accommodated in special educational programs solely for one of the impairments. The term does not include deaf-blind children.

(6) "Orthopedically impaired" means a severe orthopedic impairment which adversely affects a child's educational performance. The term includes impairments caused by congenital anomaly (e.g., clubfoot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns which cause contractures).

(7) "Other health impaired" means limited strength, vitality or alertness, due to a chronic or acute health problem such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle cell anemia, hemophilia, epilepsy, lead poisoning, leukemia, or diabetes, which adversely affects a child's educational performance.

(8) "Seriously emotionally disturbed" is defined as follows:

(i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance:

(A) An inability to learn which cannot be explained by intellectual, sensory, or health factors;

(B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;

(C) Inappropriate types of behavior or feelings under normal circumstances;

(D) A general pervasive mood of unhappiness or depression; or

(E) A tendency to develop physical symptoms or fears associated with personal or school problems.

(ii) The term includes children who are schizophrenic or autistic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed.

(9) "Specific learning disability" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage.

(10) "Speech impaired" means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, which adversely affects a child's educational performance.

(11) "Visually handicapped" means a visual impairment which, even with correction, adversely affects a child's educational performance. The term includes both partially seeing and blind children.

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Appendix D

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